

MALARIA, MAIZE AND MANGOES

A descriptive research into
local perceptions of malaria
in South-west Uganda



Master's thesis
Marlou Klaver



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Preface

This paper, written as part of my graduation examination for the 'Beleid en Management Gezondheidszorg' (health sciences) department at Erasmus University, Rotterdam (Netherlands), is the result of a descriptive, qualitative research into local perceptions of malaria in Kahoko, a village in the south-west of Uganda. The research proved to be very instructive and interesting; indeed, the unavoidable difficulties on the way did not diminish my enthusiasm, nor my curiosity.

The basis underlying the choice for this research was founded earlier in my previous field of study: during and after my study of medical science I have conducted research on malaria twice (in Kenya and in Cameroon), both times on the resistance of the malaria parasite against the most commonly used anti-malaria remedy, chloroquine¹. During the second research, I conducted, out of curiosity, an inquiry into prevention among the mothers of the children of the research. I often found methods of prevention completely different from what I, with my scientific medical background, could have surmised. Likewise, during conversations with local inhabitants, I found that for them malaria meant something very different from what I had learned. Notions such as 'a bit of malaria' and the insistence on suffering from malaria while parasitological examination had clearly proven otherwise, were difficult to grasp. My curiosity was aroused but for the time being I lacked the knowledge and methods to pursue such matters.

For this reason, and also because I feel that not enough attention is being paid to a disease of such consequence world-wide as malaria, I decided yet again to start a research on malaria. This time I wanted to pay special attention to local perceptions, which I think they deserve, and which would hopefully result in a mutual learning process: from local perceptions to mission-hospital endorsed prevention, which in turn is directed at the local community.

Many people have given me their support, co-operation and inspiration during the research process, without which the completion of this paper would not have been possible. I would like to thank them most sincerely. Unfortunately, it is impossible to name them all, but a number of people deserve a special word of thanks: the residents of Kahoko, all informants and members of the group discussions; the Bagungu family, who were so hospitable as to provide me with a home; the interpreters Maxi Twinomugisha, Casiano Baijagya, and in particular Benon Arinaitwe for showing so much dedication and patience; Bernard Kiiza, who organized all groups; Skola, the Community Health Nurse who introduced me to the residents of Kahoko; doctor Frank Karahuza, for his inspiration and helpful suggestions during the research; Rob de Vos and Anneke van Pelt, for their moral support; Nelleke Zuiderwijk and Sjoerd Postma, who in a special way would always see and help me. From the Netherlands: Dr S. van der Geest, who inspired and motivated me especially during the initial phase of the research; Dr C.M. Varkevisser, whose critical observations and suggestions I found supportive; Dr A.C. Nievaard, my supervisor, who supported me both methodologically and in terms of morale. I also want to thank the people and the funds who enabled me financially to conduct this research: MEMISA, the Stir Fund, the A.A. van Beek Fund, the Rotary Club Hoorn and Mr. T. Klinkenberg.

It only remains for me to wish the reader a pleasurable read.

Rotterdam, November 1993,
Marlou Klaver

After the translation of this thesis in English in August 1994, I would like to mention two other persons that have helped me in proceeding: John van Dort, who has translated the whole thesis from Dutch into English and Dave White who supported me in the final corrections of the translation. I would both like to thank them a lot. The Hubrecht-Janssen Fund enabled me financially to have this thesis translated. I owe them a lot.

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Marlou Klaver

¹ One of the reasons why malaria is again becoming a major threat

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SUMMARY

In order to gain insight into local perceptions of malaria, a descriptive, qualitative research was carried out, in which the leading question was: '*What kind of local perceptions of malaria exist in community X?*' Apart from this, the research is also practically accentuated: how do local perceptions of malaria, with regard to prevention, compare to preferred hospital prevention?

The relevance of this leading question emerges in stating the social impact of the malaria disease: world-wide, malaria remains death-cause no. 1, while the number of its victims is still on the increase. Since eradication of the disease no longer seems to be an attainable goal, the emphasis has increasingly been put on *prevention*.

Health care programmes, however, are invariably organized from the biomedical perception of malaria, i.e. malaria has a variety of symptoms, the cause is a parasite transmitted by the Anopheles-mosquito, the treatment focuses on the removal of these parasites from the blood; and particularly *primary prevention* (the avoidance of malaria in the body) is suggested and considered feasible.

Apart from the biomedical system, however, other medical systems exist with which the disease can be explained: the **personalistic** medical system, in which a wilful act of a person or spirit is perceived as cause of illness, and the **naturalistic** medical system: illness is then explained by a disturbance of the balance inside or outside the body and/or by the influence of the forces of nature, such as the sun.

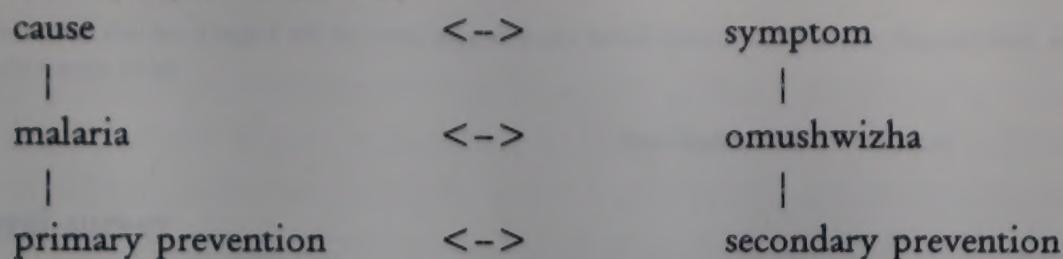
The present research shows that particularly the latter system can serve as an explanatory model for local perceptions of malaria. While 'omushwizha' (the local word for malaria) has roughly the same (variety of) symptoms as malaria, several causes are indicated: insects, among which the mosquito; forces of nature, such as the sun and the wind; food, among which maize and mangoes; and sometimes it was stated that no particular cause of the disease existed. Whenever these causes appear to originate from elsewhere (another village or area), they are seen as even more threatening.

Inside the body the originators can bring about the disease in two ways: either through the **blood** (when for instance the sun 'deteriorates' the quality of the blood), or through the '**enjoka**' (snake, or intestine): unfamiliar food causes the enjoka to 'revolt', resulting in omushwizha. In local treatment the same conspicuous double-sidedness occurs: traditional herbs and biomedical tablets act upon the blood (by slowing down its flow, or by purifying), whereas other traditional herbs work on the alimentary canal: in this way the disease either leaves the body as vomit or as faeces.

The main difference between malaria (biomedical) and omushwizha (local) rests on the opposition of *cause* versus *symptom*. From a biomedical perspective malaria is approached as cause (of a disease), whereas omushwizha is seen as an expression or symptom of a disease. This is demonstrated for example in the treatment of the disease: whereas it makes sense from the biomedical perspective to fully complete an anti-malaria cure (in order to kill all parasites within the body), it is arguable from local perceptions not to persevere: if the symptom disappears, then the treatment which focuses on the symptom might just as well be stopped.

The difference mentioned is also prominent in the description of malaria prevention: whereas in the biomedical approach specifically primary prevention is advocated, in local perceptions a preference for secondary prevention can be observed: action is taken only when

the symptoms manifest themselves, by means of early treatment in order to prevent complications from developing. Schematically:



The cause-and-effect reasoning, inherent in the biomedical system, is largely absent from the local medical system, which is why the feasibility of a malaria prevention programme aimed principally on primary prevention is considered doubtful. Recommendations for a hospital-endorsed malaria prevention policy are therefore aimed at secondary prevention, which, moreover, is also tenable from the biomedical point of view: In order to develop (semi-) immunity against the disease, the continual exposure to the disease is a requirement. At a later stage, the focus might be shifted to primary prevention; then, the local community ought to be given extensive instruction and information.

Conclusion

Without doubt, there are still some initial observations to be made and which point to the considerable need, and the opportunity, whether aspects of developed programmes should mainly be aimed towards adults, preventive measures, health institutions, or aiming for the reduction of prevalence as set by the development of the community and its public health care programme, which is the explicit aim of the Primary Health Care strategy. Under guidance of the local community, the government's role remains as the main actor, but the community and organization of the programme will considerably increase.

Nevertheless, it must be clear that the welfare of children is one the best guides to good health and well-being (WHO, 1998) and can be an overall large concern.

The last chapter, dealing with the way forward to combat malaria, would come at this point. It is estimated our home a billion deaths per year (WHO, 1998), more than half of the world's population live in malarious areas (WHO, 1998). First, probably the following are many areas where the disease is malaria and this again reflects the geographic regions and the groups risk. It is estimated that on a population of about 300 million inhabitants in Africa alone (WHO, 1998) millions of deaths occur yearly. This is caused by Plasmodium falciparum, the only deadly type out of four Plasmodium species (WHO, 1998). The disease has four main types: sporadic, endemic, although not on the WHO map, and the remaining one, the the disease could also be regional, it is very common that because of developed regions of the planet cause the most malaria infection. Therefore, if we consider under-moderate, and most relevant, and by this we the problem is on the disease. Therefore, WHO has had to plan a malaria control programme, first the malarious control programme, the existing techniques in medicine do exist, but the control is in which the emphasis lies on the poor groups in general, and young children and pregnant women (Bancu Chiriac, 1999). Moreover, the focus is shifted to prevention of the disease. The primary health care system should prove helpful in this.

Chapter 1: INTRODUCTION

"...then be sure that this is what I will do: I will bring upon you sudden terror, waisting disease, recurrent fever, and plagues that dim the sight and cause the appetite to fail."

New English Bible, Leviticus 26:16

1.1. General survey

Dutch public health care has its limits. These, however, do not seem to be determined by geographical boundaries, for it extends to several so-called developing countries. Whether the public health (care) of these countries should or should not be our concern (I try to leave this ethical question open), the fact of the matter is that we have made it our concern, simply by co-operation.

This western concern (for of course it is not exclusively Dutch) has not passed unnoticed, neither in the curative nor in the preventive spheres. UNICEF (1991) reports a world-wide reach of 80% of child immunisation in developing countries in 1991, and states thereupon that the immunisation programme of 1991 saved the lives of three million children, who would have died otherwise.

Wolffers (1992), however, adds some critical observations of a practical and ethical nature to this remarkable result, and puts up for debate whether success of developmental programmes should actually be derived from these western, quantitative standards. Besides immunisation, he argues for the inclusion of priorities as set by the developing countries themselves within the public health care programmes, which is also a main concern of the Primary Health Care-strategy: besides participation of the local community also attention to their concerns, so that cooperation by the community and continuation of the programmes will eventually lead to success.

Furthermore, he points out that the welfare of children is not the only problem that needs to be solved, and that for instance in Africa AIDS and malaria are equally large problems.

This last disease, malaria, is the one I want to focus on. Malaria, world-wide cause of death no. 1, is accountable for about a million deaths a year (WHO, 1991). More than half of the world's population live in malaria-infested areas (Bruce Chwatt, 1985). Particularly in Africa there are many areas where the disease is endemic, and there young children and pregnant women run the greatest risk. It is estimated that on a population of about 388 million inhabitants of tropical Africa 210-220 million infections occur yearly, of which 85-90% is caused by *Plasmodium falciparum*, the only deadly type out of four (Malaria Action Programme WHO, 1988). The disease has increasingly 'gained' ground, recently. Although ten or twenty years ago the assumption was that the disease would soon be wiped out, it is now certain that because of developed resistance of the parasite against the usual anti-malaria remedies, resistance of the mosquito against insecticides, and mass migration caused by civil wars, the prevalence is on the increase. Therefore, WHO has had to rename its 'malaria eradication programme' into the malaria *control* programme: the aim being no longer to eradicate the disease, but to 'control' it, in which the emphasis lies on the two groups at greatest risk: young children and pregnant women (Bruce Chwatt, 1984). Moreover, the stress is shifted to *prevention* of the disease. The primary health care-strategy should prove helpful in this.

As already noted, this strategy values the input and co-operation of the local community. Apparently, however, the disease is exclusively fought from the western, biomedical perspective: malaria is transmitted by mosquitoes and therefore one needs to protect oneself with mosquito-nets; whenever a person suffers from malaria, it is diagnosed by means of microscopic research, and this person, depending on the results, will have to complete a cure of chloroquine².

Without detracting from this point of view, I want to point out that the reason why this sounds 'logical' to us is because it fits in with our biomedical, scientific views on disease and health. However, just as we may find it difficult to understand an advice to go see a witch-doctor, western advice may be just as incomprehensible to the local inhabitants, since it originates from an alien culture, and is meaningful within that culture.

Except for a research in Colombia (Lipowsky et. al., 1992) and one in Nigeria (Agyepong, 1992), little attention has been paid, as far as I know, to the opinions on malaria of the local community itself, and to how these people try to prevent the disease from spreading, acting from their perceptions.

In the present report it will be explained why, what and how this was studied in a community near a hospital in Uganda, the Caroli Lwanga Hospital in Nyakibale, district Rukungiri. Point of departure will be the assumption that, just as medical advice by western health care workers is comprehensible within the scientific paradigmatic framework, which in turn is embedded in and entangled with western culture, the behaviour and perceptions of the local community regarding malaria are comprehensible within their 'medical system', which in turn is embedded in and entangled with their culture. The point of intersection where the western health care worker meets the local patient, therefore, establishes not only an interface between two medical frameworks, but also between two different cultures, in which each of both modes of behaviour and perceptions are comprehensible within the respective cultural backgrounds, quite possibly causing, however, also an (un)bridgeable cultural and medical gap.

1.2. Thesis statement

1.2.1. Questions

The *leading question* is:

"What kind of local perceptions of malaria exist in community X?"

The structure of thought which lies at the root of the formulation of this leading question comprises the following elements: it is assumed that local perceptions of malaria follow (automatically) from the underlying culture, which contains as it were the explaining variables. From local perceptions of malaria the *need* for prevention ought to follow, which in turn can be set off against the *supply* of prevention, thus generating a state of tension.

In chapter 2, after the discussion of the theory, the conceptual model will be discussed.

² the first two days 10 mg. of chloroquine per kilogram body-weight, the third day another 5 mg. per kilogram body-weight.

Partial questions, which will come up for discussion, include:

- ✓ -What is malaria, according to the local community?
- ✓ -How can malaria be recognized?
- ✓ -How does malaria originate?
- ✓ -Who contracts malaria?
- ✓ -When does one contract malaria? (seasonal?)
- ✓ -How can malaria be prevented? Can it be prevented?
- ✓ -How can malaria be cured; can it actually be cured?
- ✓ -How does malaria affect the body?
- ✓ -How does the treatment affect the body?
 - How can the local perception of malaria be understood in relation to perceptions of other diseases?
 - What are the underlying assumptions of hospital-endorsed malaria prevention?
 - To what extent do they link up with local perception(s)?
 - To what extent is the local community's notion of malaria and its prevention uniform? How can possible differences be explained?
- ✓ -Why do people contract malaria?
- ✓ -What happens if someone develops malaria, what is done about it? (observe).
 - How does hospital-endorsed instruction affect the villagers? Is it effective, how do they react?

1.2.2. Aim and relevance

Aim: The aim of the research is: to gain insight into the perception(s) of malaria by the population in question, so the concern is with the 'natives' point of view,' or rather 'local point of view.'

By gaining insight into the perceptions of and attribution of meaning to malaria ('the local point of view'), behaviour toward the disease can be (better) understood; so the idea is to recover the *motives* behind this behaviour. These motives can be various: social, cultural, religious, economic, political. In the first instance I direct my attention to the social-cultural backgrounds, keeping an open mind toward the others.

These social-cultural motives will eventually affect the need for health care, as well as the need for malaria prevention. The (practical) stress of this research will be on prevention: it seems to me that the efficacy of prevention depends particularly on its conjunction with perceptions of the local community (in comparison with proffered *health care*, or *medical science*).

Only if the conceptualisation of malaria and its realization is understood, will the attention be shifted toward the (kind of) need for prevention. Both the opinion of the suppliers on prevention (their perception), and their opinion of the opinion of the local population, will also be taken into account. Next, the link, i.e. the tension with the proffered, or to-be-proffered prevention, will be considered. Are these in harmony with one another? Where do possible discrepancies arise? How come?

This way, a cross-section of the entire area of need and supply on the health care-'market' is eventually described and understood, in which the focal points - or, if you like, curtailments - are malaria and prevention.

Social relevance: As already noted in the topical survey, in the fight against malaria, for a number of reasons, including the notion of Primary Health Care, the stress has increasingly been put on *prevention*. In order to implement adequate prevention, give instruction and, in addition, provide medication (which, indeed, is not restricted to hospitals), the experiences and opinions of the local community ought to be taken into account. Whenever, for example, a doctor advises a patient only to take chloroquine if he really has malaria, and the patient thinks that a bit of malaria requires a small amount of medicine, their *frames of reference* clearly differ, with obvious consequences.

Assuming a better understanding might result in a better conjunction between the persons needing and the persons supplying prevention, this report will (have to) prove its social relevance.

Policy relevance: Consequent on the previous matter, a particular institution will be better able to attune its 'malaria prevention policy' to the existing needs and their underlying frame of reference.

In this report, the conjunction of the prevention as it is supplied by the Caroli Lwanga Hospital, Nyakibale, district Rukungiri, Uganda, with the local perceptions and behaviour concerning the prevention of malaria, will be examined.

There, malaria is a considerable problem: both at the out-patient clinic and the clinic itself it tops the list of diseases (Kaharuza, 1992). In 1990 a 'Community Based Health Care'-project was initiated, which focuses, among other things, on (the prevention of) malaria. Malaria has also been elected as one of the spearpoints of the health care policy, and a special malaria-project will be established.

1.3. Structure of the report

The report is structured in the following manner: In chapter 2 a summary is given of theoretical insights as represented in the literature, which sub-divide pathological and medical systems in the world. Also a summary is presented of existing research on the perceptions of malaria. The conceptual model will then be constructed from the theory. The biomedical approach to malaria will be set forth in chapter 3. It serves to contrast the local perceptions of malaria, which will be discussed in chapter 5. In chapter 4 the used methods of data-collection and the framework of research will come up for discussion. Also a description of the research-population will be given. Chapter 5 discusses the local perceptions of malaria, or 'omushwizha', in the native language. This is the largest and most important section of this report. In chapter 6 the local supply of healers and doctors will be discussed, sub-divided into biomedical and traditional ways of treatment. Further, the ways in which the patient deals with the disease will be described. In chapter 7 the connection from the hospital toward the prevention programme will be discussed, while chapter 8 concludes the report with a final examination of the results of the research.

Chapter 2: THEORY

"Malaria? Oh that's no disease, everybody has it."



(the Mano tribe, Liberia)

2.1. Introduction

In this chapter, a discussion will be given of the categories of 'medical' or illness-systems as described in the literature, which serve to classify the various medical systems in the world.

Secondly, a summary of similar studies which also describe local perceptions of malaria will be presented. An indication will be given as to what extent these studies might be classified on the basis of the tripartition of medical systems.

The purpose of this indication is to provide the researcher, as well as the reader, with a frame of reference in which the results of the present study may be comprehended. In the final section of this chapter, this frame of reference will be outlined through the construction of a conceptual model, on the basis of which the research questions will be formulated.

2.2. Medical systems

Providers and recipients of care may view illness and health in quite different ways, even if they share the same cultural background. This may even be quite aggravated when their cultural backgrounds differ substantially; this will cause their interpretative frames to diverge even more so. Their perspectives are founded on different cultural assumptions, and avail themselves of different 'systems of argumentation', or explanatory models (Helman, 1986).

Helman distinguishes between the physician's perspective and the various lay perspectives. The first is based on scientific rationality, which means that all assumptions and hypotheses must be testable and verifiable under objective, empirical and controllable conditions. Phenomena which are to do with illness and health only become 'real' when they can be observed and measured objectively. That is when they become clinical facts. Since all 'facts' have causes, it is the physician's job to find out the logical order of events which have led to this 'fact'. For example: a patient has a fever. This is determined with the use of a thermometer (a 'fact' is established). The physician will now look for the cause. The diagnosis of 'malaria' will only be made after the cause has been identified with the use of objective and controllable techniques (microscopic blood research).

Lay perspectives, on the other hand, have a different causality. Helman distinguishes between four levels in which the etiology of illness is placed: the individual patient (in which the cause of and the related responsibility toward illness is situated within the patient), the natural world (for instance cold as cause of 'catching a cold'), the social world (for instance witchcraft), and the supernatural world (in which spirits or God are perceived as cause of illness).

Foster and Anderson (1978) summarize these four levels into *personalistic* and *naturalistic* systems. Within the first category, illness is seen as effected by the determined intervention of

an agent, such as a human, a witch, a spirit, or a god. Within naturalistic systems, however, illness is explained in non-personal, systematic terms. Illness can then be a result of natural forces, such as cold and wind, or of a disturbance of the balance within the individual, or within his social environment. An example of this kind of disturbance of balance is the humoral pathology of Hippocrates (460 B.C.): the four humours (blood, phlegm, black bile, and yellow bile) need to be in balance, both within the body and in relation to the seasons. When the balance is disturbed, the treatment focuses on the restoration of the balance, according to 'the rule of opposition': relaxation as remedy for nervous exhaustion, cold compresses for fever, etcetera. This Greek classical basis of medical science is at the root of contemporary lay perspectives of particularly Roman cultures.

I want to summarize the above categories of concepts of causality, cognitive frameworks, or medical versus lay perspectives into a tripartite classification of medical systems:

- ✓
(1) personalistic medical systems
- (2) naturalistic medical systems**
- (3) biomedical system**

A medical system will then be defined as:

"The cognitive framework from which the existence of illness may be 'explained' and from which a pattern of cultural traditions follow which are characterized by intentional behaviour aimed at improving health."

So this concerns different concepts of causality, which lie at the root of both perceptions of and behaviour toward illness, in which they find expression. In the case of (1), the explanation is found in the intentional act of an agent, in the case of (2) it is found in the influence of natural forces and/or the disturbance of a balance, either in or outside the body, whereas in the case of (3) causality is seen as conforming to (scientific) basic patterns of cause and effect, in which pathogenes (micro-organisms and viruses) as well as biochemical changes in the body are applied to explain illness.

Naturally, a medical system is not a separate entity: the behaviour and perceptions which follow from it contain cultural and social elements. Such a system is embedded in culture; a medical system is, as it were, the explanatory model regarding illness, which logically follows from the culture (Read, 1966; Nichter, 1989).

Schematically: *culture* —> *medical system* —> *perceptions and behaviour (toward malaria)*

Thus, the biomedical system follows logically from western culture, in which rationality is based on objective, verifiable (scientific) argumentation.

The above classification offers something to go by in placing local perceptions of malaria. For the purpose of illustration, the results of some of the studies which describe perceptions of malaria will be categorized below on the basis of this classification. In chapter 3, we will see that from a biomedical point of view malaria fits in the biomedical concept of causality. In chapters 5 and 6, it will be considered to what extent local perceptions of malaria, as found in this study, may be classified into the three medical systems mentioned.

2.3. Perceptions of malaria

In this section, two studies into local perceptions of malaria will be discussed. One took place in Ghana, the other in Colombia.

2.3.1. Local perceptions of malaria in Ghana (Agyepong, 1992)

In the local language a complex of symptoms very similar to those of malaria is indicated with the word 'asra'. 'Asra' may be translated as fever, although the specific word for fever is 'hedola'. 'Hedola' is a symptom of 'asra', and refers more specifically to an increase in temperature, while 'asra' refers to all symptoms in general.

'Asra' is caused by continual exposure to excessive heat. The most commonly mentioned source of heat is the sun. But also other external sources of heat, like the cooking fire, may cause 'asra'. So heat is the basic idea. Excessive labour, particularly in heat, either from the sun or fire, is seen as a reinforcing factor. To a lesser extent, the eating of (too much) 'bad' food, especially greasy food, is also perceived as a cause.

The heat causes 'asra' in the body because it is stacked in the body, which disturbs its balance. The heat would change the nature of the blood by melting it, making it turn bad and black, or by impeding the bloodstream, which causes the blood 'to fall asleep', as it were. In addition, cold or rain may clot the blood.

With the use of a herbal drink, a steambath and a bath in a herbal mixture, the blood is purged of the disease. The disease leaves the body via sweat and urine.

A naturalistic medical system might be at the root of the perceptions above. It concerns the disturbance of the balance in the body from outside (too much heat), which may eventually be restored by the elimination of the disturbing elements from the blood (through sweating and urinating).

2.3.2. Local perceptions of malaria in Colombia (Lipowsky et al., 1992)

The word 'bazo', which means spleen, refers to a traditional concept of a disease which is probably similar to endemic malaria.

'Bazo' starts with an inflammation of the spleen. This may be caused either by exerting activity, or by taking 'hot' food. The inflamed spleen then attracts bodily fluids, i.e. blood or water, and thus forces the patient to drink too much. This process leads to a swelling of the spleen, which is the main symptom of the disease. When the disease progresses, the liver may be similarly affected. The 'meeting of the liver and the spleen' is considered to be a lethal complication (this might suggest a rupture of the spleen).

The traditional treatment is given by so-called 'spleen-prayers'. It consists of invocations, recovery ceremonies and the administration of herbs. The author does not deal with the invocations, but the herbs are classified into 'cold' plants and 'hot' or 'bitter' plants. The former are meant to lower the temperature, the latter to lessen the inflammation of the liver and the spleen.

Again, we find the idea of balance, characteristic of the naturalistic medical system: hot food and exerting activity cause the disease, of which the fever may then be treated with the use of cold herbs. I am not sure about the balance-restoring effect of bitter herbs as a remedy for inflammation.³

2.3.3. Other studies

Other studies into perceptions of malaria have, generally speaking, not been so exhaustive and fundamental. For the sake of completeness some are mentioned:

— Sardinia (Brown, 1981 and 1983): malaria is caused by 'bad air' (*mal aire*), and therefore people are keen to settle at the top of a hill, where there is plenty of fresh air about. In view of the influence of the natural world, a naturalistic concept seems to be the underlying explanatory model.

— Brazil (Coimbra, 1988): malaria is a 'hot' disease, caused by intake of hot food, such as pork, alcohol and peanuts. Besides, it is believed that the mosquito may transmit malaria, since it likes to stay around stagnant, 'rotting' water. When a human gets bitten by a mosquito, it would introduce the hot, rotting material of the water into the bloodstream, and thus cause malaria. Again, a naturalistic medical system seems to be the foundation of these perceptions of illness. The fact that the mosquito is termed as causative agent does not necessarily mean that the 'explanation' is a biomedical one: the biomedical 'contribution', i.e. the mosquito, is incorporated within the existing medical system.⁴

— Sri Lanka (Ault, 1983; Silva, 1991; Silva et al.): The malaria season is associated with cyclical changes in the environment: "The fever breaks out when the flowers of the thora-plant start to appear." The treatment consists in the administration of specific herbs. A piece of string around the neck is seen as protective — not as healing, because, it is thought, someone with fever is susceptible to demonic attacks. A mixture of naturalistic (the natural environment) and personalistic (the demons) medical systems seems to be the basis.

— Botswana (Mazonde, 1988): besides mosquitoes, witchcraft is perceived as cause of malaria. The treatment therefore consists of both biomedical and traditional (faith healing) ways of treatment. So here we see a clear predominance of the personalistic component.

— Uganda (Kengeya-Kayondo, 1993): 'omusujja', the local word for fever, is caused, generally speaking, by certain food or drink, environmental factors and vectors such as mosquitoes. A mixture of naturalistic and possibly also biomedical systems might be at the root of this.

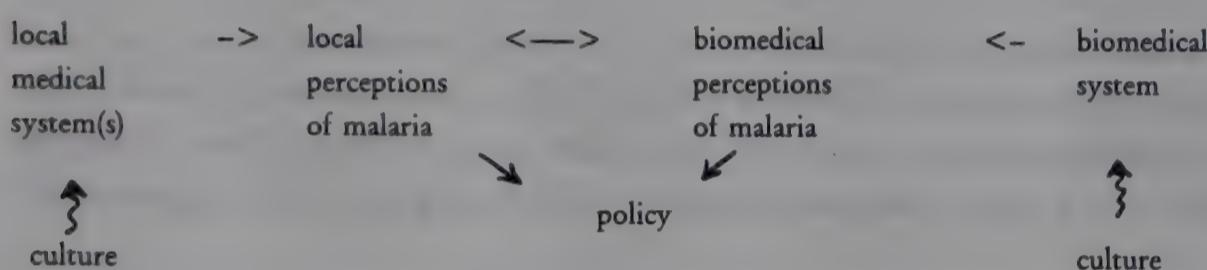
³ Along the lines of Hippocrates' humoral pathology the following might be devised: in order to counter the surplus of blood (according to Hippocrates warm and wet), the rule of opposition would suggest the administration of something cold and dry (black bile), i.e. something bitter.

⁴ See for instance also Farmer and Good (1991), who describe how a new disease —AIDS— is incorporated within an existing medical system, or frame of reference, and subsequently is explained in those terms.

2.4. Conceptual model

On the basis of the various medical systems, as have been described, a conceptual model is given below which aims to make explicit the basic assumptions of the researcher. So it does not aim (as in quantitative research) to pinpoint causal relations, it merely serves to indicate connections. The design of the model is polar, two paradigms are set off against each other, with an area of tension in the interface, from which policy needs to be created. This polar character also offers a frame of reference of and for the researcher which might be useful to focus more clearly on matters, and to get more of a grip on difficult concepts such as 'perceptions' and 'culture'.

This conceptual model may thus be represented:



Firstly, local perceptions of malaria will be discussed. Secondly, the underlying medical system(s), as well as the culture in which these are embedded, will come up for discussion. In contrast with this, we find the biomedical perception of malaria, of which a short description from the literature will be given. It is assumed that the hospital will set up its malaria policy on the basis of these biomedical perceptions. The area of tension between both medical systems, focused on perceptions of malaria, will (ideally)⁵ find expression in a workable malaria policy. So this is, as it were, the point at which the contrasts will be concretized.

This model seems to suggest that the local medical system cannot be similar to the biomedical system, and that this would automatically result in divergent perceptions of malaria. This is, well perhaps partly, unintended. The local medical systems may well contain elements from the biomedical system, as far as they are *local*. The biomedical system is probably not traditional for local medical systems. The local medical system might, however, be an osmosis of traditional system(s) and biomedical influences. In order to avoid a Babel-like confusion, from now on local medical system(s), which serve as a background to or are embedded in local perceptions of malaria, will be taken as starting points. The system is traditional insofar as it is not biomedical, and vice versa. These latter two concepts, then, are mutually exclusive.⁶ The primary aim of this study is to track *local* perceptions; whether these have traditional or biomedical roots is not of prime concern. Whenever possible, however, this will be indicated. 'Acculturation' or the inclusion of biomedical influences into the local medical system, will also be indicated.

⁵ To say that "an area of tension between both medical systems will find expression in a workable malaria policy" does not necessarily mean that this is the case. Ideally, it would be, of course, but health care organizations may very well base their policy on their own perceptions exclusively. Unfortunately, this is what happens most. This study hopes to contribute to a development which seizes the opportunity that is offered by this area of tension between different perceptions for an optimal malaria prevention policy.

⁶ So: local perceptions = traditional + biomedical perceptions, in which traditional -/- biomedical. This does not have to mean, though, that no common ground exists between traditional perceptions and biomedical perceptions (for instance 'wind' and 'air' as transmitters of a disease).

The general question of '*What are the local perceptions of malaria?*' may now be concentrated on the basis of the theory and the formulated frame of reference on five specific research-questions. This concerns, then, a sharpening of the general question, and these five questions will be considered both in terms of biomedical and of local perceptions of malaria:

(1) symptoms: how to recognize malaria?

The aim is to determine what exactly is understood by malaria, and to find out whether the diseases as formulated within both systems are similar in appearance. In fact, this is a first demarcation of concepts: only when the researcher and objects of research have reached an understanding of what they are talking about, can underlying notions and concepts be examined.

(2) causes: what is, or are, the cause(s) of malaria, according to local perceptions?

In answering this question, the concept of malaria will be further placed within local thought on illness, and will thus gain meaning. Moreover, the answer may offer a clue toward the underlying culture. This way, a movement toward the left of the conceptual model is generated.

(3) treatment: After the placement of malaria within the local 'illness-spectrum', this rather practical question: how is malaria treated? The answer will most likely be related to the perceived cause, or causes, of malaria (for if the cause is known, the treatment may be focused on it), particularly in what way the cause may effect malaria in the body.

On the other hand, it might well be possible that *biomedical* medicines are used, while at the same time *local* explanations of the disease are given. This would result in a swing to the left in the conceptual model. The next question would be: 'How do biomedical medicines fit into local thought on malaria?'

(4) prevention: how to prevent malaria, but also: can it actually be prevented?

Besides offering a check on the causes mentioned, this —biomedically oriented— question also offers a possibility of making a connection with a malaria prevention policy.

(5) other diseases: In order to arrive at a better definition of the concept of malaria, connections with other concepts, i.e. related diseases, will be examined. This also provides an opportunity for 'testing' concepts of illness.

After this exposition of the conceptual model, which needs to be filled in on the basis of the above five questions, in the next chapter the biomedical perception of malaria, as follows from the biomedical system, will be discussed. Chapter 4 will deal with the plan of research, on the basis of which the five questions will be addressed. Chapter 5 will then be concerned with local perceptions of malaria, along the lines of the first four questions, while chapter 6 particularly addresses the fifth question.

Chapter 3: MALARIA

"Of all infectious diseases there is no doubt that malaria has caused the greatest harm to the greatest number..."

Laderman, 1975



3.1. Introduction

In this chapter a brief description of the disease malaria will be given. This description is represented in terms of the -present- biomedical or scientific knowledge concerning malaria. This biomedical viewpoint is usually also the viewpoint from which (tropical) physicians take their cue, and from which malaria programmes are initiated. Besides providing the reader with some knowledge about malaria, this chapter especially aims to contrast the *local* perceptions (cf chapter 5) with this biomedical viewpoint. This way, certain differences will be accentuated, while certain similarities may also be more conspicuous.

The following matters will be discussed, in consecutive order: the symptoms of malaria and the course of illness (3.2.), the cause of malaria (3.3.), its treatment (3.4.), and its prevention (3.5.). Finally, some concluding remarks are given (3.6.).

3.2. The symptoms

The most important characteristic of malaria is its enormous diversity of symptoms. ✓ Prospective (tropical) physicians are taught that malaria can appear in the guise of almost any other tropical disease. It can express itself in various ways, ranging from a mild headache to an acute lungoedema. The basic symptom, however, is fever, although it is not, nor are the other symptoms, specific of malaria. During its course, the fever usually peaks, with body temperature rising to 40 degrees Celsius every two or three days. The patient will feel depressed and not up to the mark. He will complain of severe headache, muscular pain, and pain in the bones and joints, especially in the lower backbone. Shivering, nausea and vomiting, diarrhoea, and also constipation, frequently occur. Besides, the patient may also cough. The high temperatures may, especially in small children, lead to fits of fever. In between fits, a patient may feel 'well', but after a while another fit may strike him. But the course of the disease itself can also assume many different shapes, ranging from the classic culminating pattern of fever to a persistent low-grade fever, or even an asymptomatic infection (Manson-Bahr, 1987).

During *physical examination*, anaemia may be diagnosed. The spleen and the liver may be enlarged, and jaundice may also be identified. In case of vomiting, bile might be found in the vomit. Often, the patient is dried-out. Chronic malaria is characterized by an enlarged, palpable spleen.

Complications of the disease, which by the way exclusively occur in the lethal type (i.e. malaria tropica, also the most common type), include: damage of the liver and kidneys, lungoedema, rupture of the spleen, and the dreaded cerebral malaria. The latter may lead to epileptic-like fits, signs of meningitis, mental disorders or neurological symptoms, all of which may lead to coma. In 20% of the cases the patient dies.

In pregnant women malaria may lead to spontaneous abortion.

The seriousness of the symptoms though depends to a large extent on the meanwhile acquired ('semi'-)immunity. People who have had malaria infections before, will react less violently to their next infection. This is also the reason why particularly young children and pregnant women⁷ run the risk of catching the more serious forms of the disease. Also, people from areas where malaria is hardly or not at all present run the risk of reacting more violently when struck with a fit of malaria (Wernsdorfer, 1988).

3.3. The cause

Malaria is an infectious disease caused by a parasite named Plasmodium. Four species of this parasite exist which can infect human beings. One of these is Plasmodium falciparum, the causative agent of malaria tropica, at once the most common and the most dangerous species. It is the only species capable of engendering organ complications, and thus potentially lethal.

The parasite is spread by the female Anopheles mosquito, which during blood ingestion can both introduce asexual forms of the parasite (the so-called sporozoa) and receive sexual forms (gametocytes). The latter arranges for the possibility of infecting succeeding victims, while the former ensures the infection of the present victim. After the migration to the liver, the sporozoa enter into the red blood cells, where an asexual fission takes place. The multiplied parasites (merozoia) eventually bring about the symptoms mentioned, through all kinds of biochemical reactions. This happens ten to twenty days after the mosquito-bite in question.

Figure 4.1. illustrates the cycle of the malaria parasite. For each of the different stages the specific names of the parasite are given (Sherris, 1984).

⁷ During pregnancy the immune system of the woman changes in such a way as to render her more 'vulnerable' to malaria infection.

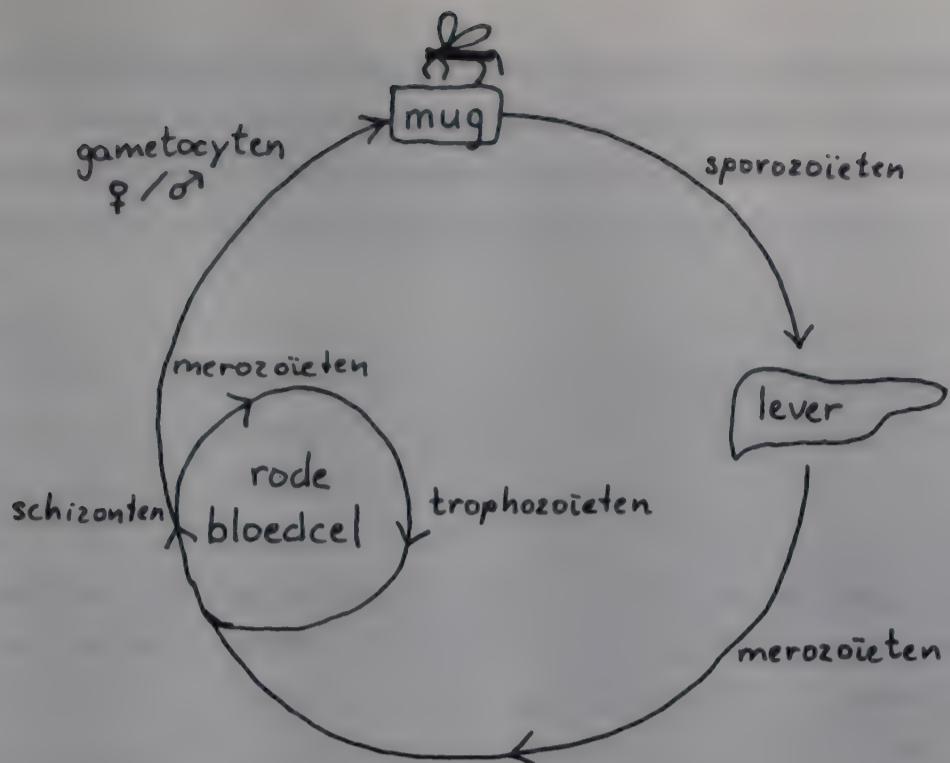


fig. 4.1.: the cycle of the malaria parasite

The diagnosis of malaria is made with a large drop of (blood) preparation. In this preparation the malaria parasites are recognized as little flags or musical notes (see fig. 4.2.) (Sherris, 1984). But even without a 'positive large drop' one may still be infected with malaria: the concentration of parasites in the peripheral blood may be, at that particular moment, too low for recognition.



fig. 4.2.: malaria parasites as they are recognized in the microscopic blood preparation

Malaria may be transmitted directly from human to human through blood transfusion. Furthermore, a pregnant woman may infect the foetus with malaria parasites, but then again she usually also transmits her antibodies, so it does not necessarily have to result in any symptoms. However, spontaneous abortions do occur and children may be born with malaria. Otherwise, malaria is not directly contagious.

The Anopheles mosquito thrives best in (sub)tropical areas, up to an altitude of about 2000 m. The laying of the eggs and the development of the larvae requires (stagnant) water. This explains why malaria prevails especially at the end of the rainy season. The male mosquito feeds on fruit-juice, the female on human blood. She stings especially at night, from dusk till dawn (Manson-Bahr, 1987).

3.4. The treatment

With the use of medicine the reproductive cycle of the parasite in the body may be interrupted and the parasite may thus be eliminated from the blood. An adequate treatment therefore requires full completion, in order for all the parasites in the blood to be killed.

In the first instance, and in the case of a mild attack of malaria, chloroquine remains the appropriate medicine. It is cheap, it works quickly, and there are hardly any serious side-effects. It can be administered both orally and parenterally. An adult needs to take 1500 mg base, which equals ten tablets, over a period of three days.

✓ However, the disadvantage of chloroquine is the increased resistance of the malaria parasite to this medicine (Malaria Action Programme WHO, 1988). This resistance is caused by, among other things, patients not completing their cure of chloroquine, thus allowing for the parasite's gradual habituation to the resulting low concentrations of chloroquine in the blood. Therefore, if a patient does not recover after a complete cure, another medicine will have to be used⁸. In very serious cases kinine is administered first.

Most of these medicines taste very bitter, particularly chloroquine and kinine.

3.5. Prevention

There are several ways of preventing malaria. These can be roughly classified under two headings: primary prevention, which aims to prevent the contraction of the disease; and secondary prevention, which aims at early recognition of the disease after contraction (Bouter, 1988).

3.5.1. Primary prevention

The possibilities of primary prevention may be expressed in several focal points:

(a) the mosquito:

The reproduction of the mosquito may be curtailed. This may be accomplished by draining small pools of stagnant water, but also by using insecticides.

(b) contact between mosquito and human:

Human beings may protect themselves with mosquito oil, ample clothing at night, and also by sleeping under mosquito-nets (Nevill et al, 1988)

⁸ For instance Fansidar (a combination of pyrimethamine and sulfadoxine), kinine, mefloquine, or halofantrine.

A combination of both, i.e. sleeping under a mosquito-net which is impregnated with insecticide, seems to be most effective in preventing malaria (Alonso et al, 1991). The other measures however do not appear to contribute substantially to the reduction of malaria. There is also a third focal point:

(c) the parasite:

With the aid of malaria profylaxe (for example chloroquine) the multiplication of the introduced parasite within the blood may be prevented. Thus, one may actually be infected, but this will not result in any symptoms.

This method is particularly used on non-immune persons, such as tourists. Sometimes it is also recommended to pregnant women, young children, or immigrants from non-endemic areas. Again, the disadvantages are chloroquine resistance and the long-term side-effects of chloroquine.

3.5.2. Secondary prevention

Secondary prevention aims at enlarging the chances of recovery through focusing on the recognition of malaria in the early stages. Early treatment with the aid of a complete cure of chloroquine is the essential method. The advantage of this method over primary prevention, indeed, is that it allows the malaria-patient to build up and maintain his or her own (semi-) immunity. For continual exposure to the malaria parasite also stimulates the body's defence mechanism, which thus may provide some protection in subsequent cases of infection⁹ (Wernsdorfer, 1987).

3.6. Concluding remarks

After this rather medical discussion of malaria, some concluding, but at the same time cautionary remarks may be in order: Malaria, then, is seen as a disease with a confusingly wide range of symptoms, but with only one cause and only one transmitter. The diagnosis is made on the basis of observations of the cause, i.e. the parasite. The treatment of malaria exists in eliminating the parasites from the blood with the aid of medicines. These medicines interrupt, through various biochemical reactions, the multiplication of the parasites in the body. In order to succeed, however, a cure must be completed.

Since the cause of malaria is known, prevention is possible, even though certain organisational problems (how to cover all mosquitoes?) and biochemical problems (resistance of the parasite) disable the completion.

If we were to subsume the underlying medical system under the classification discussed in chapter 2, it would quite clearly tally with the 'scientific', 'western' biomedical system. Causality is seen as conforming to basic patterns of cause and effect, which is also prominent in

⁹ This kind of immunity however is not complete, and is therefore sometimes called semi-immunity. As opposed to other infectious diseases, like for instance German measles, human beings lose their acquired immunity if not continually exposed to the disease.

physics and chemistry. Pathogenic organisms, in this case the malaria parasite, are used as an explanation of the malaria disease.

This description will serve as background information in the discussion of the local perceptions of malaria in chapter 5. The same questions will be addressed: how is malaria recognized, what is its cause, how can it be treated, and finally: which possibilities for prevention exist? Each paragraph will be followed by a discussion on the basis of differences and similarities between both points of view - the biomedical and the local.

4.1. Introduction

Below an outline will be given of the used research methods, and of the underlying methodological and theoretical assumptions. Also a description of the investigated population will be given. Bottlenecks and difficulties will be noted, as well as the various efforts which were made to solve them. Further, the procedures of control on objectivity, which in a qualitative research are delicate yet important, will be discussed.

Since beforehand hardly any clear impression existed of the population under examination, nor of the local 'problem' that was to be examined, a descriptive, explorative type of research was chosen. Furthermore, since *insight* was the goal aimed for, a research of a qualitative nature was carried out. The used methods of research concur with this. Theorizing was not the primary goal; rather, applicability was aimed for. Nevertheless, it was possible to formulate some theoretical hypotheses afterwards.

The particular nature of the research did indeed yield something else: by mingling for a short period in an African community in order to participate as much as one can while observing and trying to 'enter into' the prevailing culture, one does indeed enter a tricky zone. On the one hand one tries to meet the local community on equal terms, but on the other hand one does not want to infringe rules of life, such as for instance those concerning receptions of special guests. How to approach, for example, a respondent on equal terms if the only chair in the house is brought out especially for you, the (white) guest? Understanding the communal culture, by putting myself in the shoes of people under study, seemed to me, particularly during the early stages, a very tall order indeed. Eventually, I was able to accept the way things were done, and to acknowledge the limitations, but also to see the advantages (like, for example, the fact that participants were always prepared to co-operate), and to accommodate myself to social rules. On the other hand, people also got used to my presence after a while, and gradually a sense of mutual confidence was developed.

4.2. Theoretical orientation

An 'open', exploratory approach toward the field of research is of primary concern in this paper. The underlying assumption is that one needs to examine, to understand, to 'verstehen' the local population's signification of malaria 'from the inside'. Only the use of an open method guarantees affiliation with the viewpoints of the people involved; besides, it enhances a certain flexibility, which allows for adaptations to be made according to obtained findings.

This approach is generally used in theoretical orientations of the various social sciences. Since the present study operates across the boundaries of several disciplines within the health sciences (i.e. medical anthropology, medical sociology and management science), an appropriate selection of various theoretical lines of approach from these disciplines will be given. It will be stated which aspects of these approaches concern the theoretical framework of this study,

stressing the complementary character of the different orientations. The *cognitive orientation within medical anthropology* will be described in terms of theoretical orientation, while the *grounded theory approach* in connection with this will be used as a methodological context. Both orientations stress the process of signification. These are:

(a) the cognitive orientation within medical anthropology (van der Geest, 1983), which confers upon the human mind a certain primacy. Cultural aspects of medical phenomena are explained, understood or interpreted mainly through the study of cognitive processes. Language is an important factor in the signification and rendering of ill-health, but also via the body and one's experience of the body does the subject give form and meaning to his relevant social and natural environment. Disease is then defined as the rendering of the experience and perception of ill-health. Ill is the person who says "*I am ill*".

The contribution of this orientation is mainly of an 'emic' kind: it concerns research into and starts from the thought-patterns and experiences of informants. The attention is mainly focused on the subject-related cultural construction of ill-health. To consider ill-health as a cultural phenomenon, which cannot be reduced to biological dysfunctions, means that treating people with their disease is also highly determined by the socio-culture.

Assuming that human choices are effected on the basis of knowledge, forming of opinion, and rules of conduct, we see that the choice of therapy lends itself for such a cognitive approach. I think it is possible to conclude that also the choice of prevention can be applied to such an approach.

Although the premise which says that acting follows logically from reasoning is open to criticism, it still remains feasible as a starting point, since it will facilitate the search for relations between perceptions and behaviour. Of course, its eventual feasibility will surely be determined.

perceptions of malaria ----> behaviour concerning (prevention of) malaria

(b) The **grounded theory approach** (Wester, 1991) is the second, more general research-perspective which was used a guiding principle in the chosen line of research. It is based on insights derived from symbolic interactionism and pre-eminently offers practically-oriented possibilities for research (such as research on policy). The basic assumption concerning the social reality is that reality is pre-interpreted and produced by humans. Besides signification, interaction is of primary concern: people produce social reality by mutually implicating their interpretations and definitions in their acts. The present study, however, is more concerned with the first accent in the theory of symbolic interactionism: social reality is seen as a product of the ways in which people and collectives construe their world through structures of signification. What does this construed reality look like with regard to malaria and preventive action? To what extent do they agree with one another regarding the definition of the "malaria (prevention) situation"?

In the grounded theory approach, methodical guide-lines for the execution of qualitative research are described. In short, these amount to the researcher's effort at discovering the situation-definition of the research-objects, i.e. their perceptions and interpretation of reality, and how these can be related to their behaviour. Therefore, the researcher has to "get into the shoes" of his research-objects, as it were. The implications this has for the methods of research will be discussed below (in section 4.4.).

The methodical guidelines which are given in the founded theoretical approach are, as already noted, eminently suited for practically-oriented research such as policy (evaluation) research. Van Vught (1987) summarizes these methodological principles concerning policy-research under the heading of '*hermeneutical view within the policy-evaluating theories*', which assumes that a construed reality can only be known through a comprehending ('verstehende') method: one tries to see reality in the same way the studied subjects see it; one tries to 'penetrate' into the research-object's mind. Both in the ex ante evaluation research and in an ex post policy evaluation, the researcher needs to identify with the (future) behaviour and intentions of the persons involved. In this case one might think of the initiation of a malaria prevention programme and of the population for which it is made.

To conclude: a comprehending, "verstehende" description is aimed for, in which the cultural context-restrictiveness of human action regarding (prevention of) malaria will be of prime interest. This is important for the applications (hospitably endorsed malaria prevention policy) that can be matched with it. Careful observation and comprehension of what people think and do with regard to malaria will be the main interest, in which the field of study will be approached in the most 'open' way, using the following guiding principles: malaria, its meaning, its context, the prevention of malaria, and the (expected) reaction(s) to a policy of malaria prevention.

4.3. Framework of research

The framework of research follows from the discussed theoretical orientation and the conceptual model, as given in section 3.4..

Before the actual field-work was started, a brief study of literature was carried out. Its purpose was on the one hand to gain knowledge about the subject in question - perceptions of malaria - as well as to take stock of underlying theories of illness, and on the other hand to familiarize myself with the methods of research that were to be used, particularly those of medical anthropology, with which I had no previous experience. The study of literature formed the basis from which I was able to formulate the provisional objective, the leading question and subsidiary questions. These were packed among the luggage with which the researcher departed for Uganda, where the actual research was yet to take place.

Research activities were carried out from the location of Nyakibale Hospital in south-west Uganda. This hospital is planning to initiate a malaria prevention programme. For the actual field research, a more distant community, Kahoko, was chosen. This was done for several reasons: firstly, the choice of a community outside the hospital was deliberate, ensuring that no biomedical perceptions, common to the hospital, would be of influence. The assumption being that an ordinary village, one not too much involved with the hospital, would prove to be an average village reflecting average perceptions. Secondly, this set-up offered a possibility of entering into a local community, of living there, and of making as many observations of daily life as possible, without making the hospital's influence felt too much. Furthermore, the village where the field work was done was one of the places at which the hospital's 'Community Based Health Care'-project was aimed. Although this means that the community does actually

experience some influence of the hospital, mainly through bi-monthly vaccination and education meetings, the advantage for the hospital is that it would thus gain insight into local perceptions of one of the malaria project's target groups. However, the CBHC project has been in operation only recently, and before the malaria research, no specific attention had been paid to malaria in education. Finally, there was also a practical advantage: since the hospital maintained relations with the village, it was relatively easy to organize the research there.

The field work comprised four stages:

1) orientating

pre-stage: (from May 4 1993 to May 26 1993)

- taking stock of the issue under research;
- making contacts with research population, and gaining permission of local authorities;
- training of the interpreter;
- 'try-out' group discussions;
- analysis of the first explorative findings;
- discussing these with interpreter, chief of medical staff, and supervisor;
- readjustment of the questionnaire.

2) first stage

field work: (from May 27 1993 to July 2 1993)

- focus group discussions in Kahoko;
- some individual interviews;
- observations;
- translation, analysis and provisional interpretation, after which discussion with interpreter, chief of medical staff, and supervisor;
- determining gaps in knowledge and understanding.

3) second stage

field work: (from July 3 1993 to July 28 1993)

- more selective questioning (filling in the gaps in knowledge, checking of hypotheses and findings);
- individual semi-structured interviews with key informants: local healers, malaria patients, mothers;
- (participating) observations;
- analysis and interpretation;
- discussion with supervisor.

4) 'member

check' stage: (from July 29 1993 to August 18 1993)

- discussion with management team about findings;
- writing of preliminary results of research;
- discussion with supervisor;
- discussion of results of research with the villagers;
- evaluation with supervisor.

Within each stage, the cycle of data-collection - analysis - reflection was completed, before moving on to the next stage. The dividing line between the stages is drawn on the basis of these cycles; in time, however, overlaps may have occurred.

The analysis' nucleus is formed by the results of the focus group discussions (first stage field work). The second stage field work particularly offers supplementary information, filling in gaps of knowledge from the first stage, and it also modifies the found attitudes and opinions of the first stage with observed behaviour regarding malaria.

Some points require explanation:

- * Before the actual field work was started, an orientating pre-stage took place. First, some insight into the subject in question was gathered from talks with people in the hospital. One of the things which emerged from these talks was that people consider the eating of certain fruits or the weather as possible causes of malaria. However, I was also able to hear from the hospital's medical manager, an experienced researcher himself, that group discussions would be an excellent method of studying perceptions of malaria at community level. Eventually, some group discussion 'try-outs' were conducted in the hospital, both in order to train the interpreter and to familiarize myself with this method. Moreover, the results of these try-outs enabled me to sharpen the questions, and to adjust the list of topics.
- * The supervisor was a Dutchman living in Entebbe, who had graduated in Health Planning and was working, during the period of the research, on a 'diarrhoea programme'. In this capacity he has also conducted several studies into perceptions of diseases and traditional healers. The emphasis of his input was mainly on the managing aspect of the research, although he provided some helpful suggestions on other areas as well. Often, these occurred during fruitful discussions, which helped to reveal latent insights and questions. It was possible to contact the supervisors in the Netherlands only in writing, which was actually done a few times, and this provided some additional suggestions and advice.
- * The hospital's medical chief of staff is an Ugandan gynaecologist with a lot of research experience, especially in the area of public health. This, in combination with the fact that he was a native from the region in question, made him an ideal informant. Unfortunately, he had very little spare time. Nonetheless, he was frequently willing to answer my questions and was able to provide a lot of advice and background information, both in the methodical and the cultural spheres.
- * Apart from being a good translator, the interpreter also turned out to be a valuable informant. Whenever he translated something I did not understand, he was able to explain it to me. Moreover, as he got to know more about my interests and focal points, he managed to provide some background information spontaneously as well.
- * During the period of research, I spoke with as many people as possible about malaria and its significance, but also more generally about ill-health, the daily practice and rituals, and the culture. This information often emerged in talks rather than interviews, my curiosity simply leading the way. Striking remarks or events were recorded in a journal.
- * During the second stage of the field work, the translation was done by two other interpreters (a man and a woman). Both were natives from the actual village, which meant that they were able to introduce me quickly and effectively to important key informants. Their translation abilities however, were considerably less, as were their interest and effort in the research. Still, this choice seemed justified (even in disregard of the practical advantages): Firstly, it offered the

possibility of checking the interpretations of the previous interpreter. Secondly, the fact that one of the interpreters was a woman enabled me to interview women with the use of a female interpreter, and men with the use of a male interpreter, which made a difference, particularly in the case of women. Also, at this stage in the research the questions were more specific, and needed 'only' simple translation. Finally, the fact that both interpreters, unlike the first interpreter, came from the village itself, may have caused a different influence on the reliability and validity of the information.

* The observations during the first stage and the second stage differed in intensity: if during the first stage they served more for the purpose of getting acquainted, and, as a result of time-consuming group discussions, were necessarily somewhat limited, during the second stage they given more emphasis and attention. Tentatively I want to call these 'participating' observations, since I partook a great deal more in family and social life. The field notes made in this period were more extensive, and enabled me to ask for explanation or check about earlier observations, during walks in the company of one of the interpreters toward informants.

* It was, after ample consultation of the supervisors, wittingly decided upon that the second stage field work would also be executed in Kahoko. Although a possible disadvantage may have been the fact that the information is drawn from one area exclusively, thus allowing for the possibility that all conclusions and interpretations are valid only for this particular community, a number of considerations, indeed, justify this choice: The comparison between information gathered during the pre-stage (the 'hospital group') and information from the first stage field work, did not yield any significant differences (apart from the fact that the information from the hospital tended to be a bit more biomedically shaded). It was assumed that another research unity from the same district would not make any real difference. Besides, the aim during this second stage was not so much the generalisation of findings, but rather a deepening of knowledge, as well as checking the interpretations. For these reasons it seemed a good idea to stick to the same research unity. Finally, there was a tremendous practical advantage: the contacts in this community had already been made, so less precious time needed to be invested in the commencement of new relations. Thus, more time was available for making observations and doing interviews. Also, the community had grown more accustomed to the presence of the researcher, which may be of consequence regarding the validity of the observations.

* A complete 'member check', however, was not possible. The period of research was simply too short for that (the final version was to be completed in the Netherlands), and there was also the fact that the researcher's frame of reference differed widely from that of the community in question, which raised the question of its use, especially on a more abstract level¹⁰. So a 'member check' of the results was indeed done, but a 'member check' of interpretations was restricted to supervisors and the management team.

¹⁰ How to check whether a difference between malaria and 'omushwizha' can be reduced to a difference between cause and symptom, if the community only recognizes 'omushwizha'? This was indeed attempted in a conversation with some higher educated persons from the village, but one of them simply denied the difference, while another became very confused about it.

4.4. Methods of data-collection

In this section, the used methods of data-collection will be discussed, as well as the procedures of control, which were executed in order to ensure as much as possible the objectivity of this research. Several methodological guidebooks¹¹, as well as advice given on the spot, served as models. The following items will be discussed: focus group discussions, semi-structured interviews with key informants, and candid observations.

4.4.1. Focus group discussions

Both in the pre-stage and in the first stage field work the method of group discussions was used as a means of collecting data. Although the researcher was not yet familiar with this method, it was nevertheless decided upon to use this method as the first way of collecting data. This was done, for the reason that the literature on the subject yielded a number of advantages which were thought also to apply to the present situation. Kahn et al (1992) mention the following advantages of focus group discussions:

- they may agree with the accustomed ways in which a (village) community usually reaches its group decisions;
- the group situation may encourage people to express their perceptions freely, since they all share the same background, which, in comparison with other qualitative methods of research, decreases the possibility of socially desirable answers (unless it concerns a delicate subject);
- the possibility of misunderstanding is slight, because of the interaction within the group;
- it is a quick way of surveying attitudes, perceptions and opinions.

The disadvantages, however, are:

- the possibility of making mistakes during the transcription is considerable, especially if the information needs to be translated first;
- certain topics are prone to be avoided in group discussions.

Ideally, a group consists of about eight to twelve participants. It includes a chairman ('moderator') who leads the discussion, asks the opening questions, tries to pursue the subject, and tries as much as he can to stimulate everybody to active participation. His part is a stimulating and motivating one, while he takes care not to pass judgement on anyone, either verbally or non-verbally. There is also somebody present who takes notes and watches over the interactions within the group. The discussion is recorded on tape, and afterwards transcribed.

Obviously, the moderator's task is an important one. He needs to know about the aim of the study, needs to have internalized it as it were, and he needs to be able to play a flexible, non-directive yet stimulating role, all the while leaving room for unexpected turns in the discussion. In order to be able to do all these things, the moderator was trained in advance, before the actual field work was started. This was done in the following way: First, he was presented with the aim and leading questions of the research, both in written and spoken word. Questions and obscurities were discussed. Next, a brief open interview with the man himself

¹¹ See: ten Have (1977), Huijts and van Buuren (1992), Nievaard (1990), McCall and Simmons (1969), Schatzman and Strauss (1973), Spradley (1980), Swanborn (1987), Tomlinson (1989), and Wester (1991).

took place, in order to show him how to get people, in a stimulating way, to voice their attitudes and opinions. This was discussed afterwards. Then, an interview with the Community Health Nurse took place, which was directed by the researcher, while the interpreter and prospective 'moderator' took notes of the conversation. In the interview, possible local perceptions of malaria were discussed. Afterwards, this conversation was evaluated by the three of us. Questions and obscurities were cleared up. Finally, three try-out group discussions were conducted in the hospital. The interpreter and the community health nurse took turns in presiding and taking notes. After each interview, a joint review was held, in which, again, questions and obscurities were dealt with. The researcher attended these interviews, particularly in order to watch over the process and to make notes, which could afterwards be discussed. Of course, the group discussions were conducted in the local language, which obviously meant that the researcher was not able to follow the conversation. However, she did follow the notes that were being made during the discussion. After each of the interviews, which were being tape-recorded, a translation was made by the interpreter, and, simultaneously, a transcription was made by the researcher. Mutual questions and remarks were dealt with. For example, when during the interview one of the participants had said something that was not quite understood, the interpreter was asked to pursue the subject another time.

The whole phase of training passed off satisfactorily; the actual field work could therefore be looked forward to with confidence. Before the group discussions in the village community were held, the headmaster of the primary school had to organize two groups twice a day. These were selected on sex, age, and location in the village. During an introductory visit I had asked him to organize different groups: young women, older women and (older) men, in groups of eight to twelve persons. He himself proposed to compile the groups from different parts of the village. Also, I had asked him to select for each group a set of persons of comparable socioeconomic status. He adhered reasonably well to this agreement, although I had to remind him during the actual field work. Not infrequently it turned out to be impossible to exclude one or two 'important' persons from a group which consisted otherwise of 'ordinary' people. These were, of course, people who considered it their duty and honour to see me (properly). With the aid of the interpreter I managed to explain afterwards why sometimes it was better not to have these 'important' people present¹². The programme had to be rescheduled a couple of times, because of intervening funerals, but eventually eight group discussions were held (for an illustration, see appendix 4). In these discussions, the interpreter was assigned the role of chairman, the headmaster was secretary, while the researcher once again watched over the process and, when needed, helped out. As she took notes, she observed the course of the discussion, and was able, with the help of these notes, to use the last ten minutes of each session to address more specific questions or to have obscurities clarified. Each discussion was evaluated afterwards on the basis of the notes. The tapes could be listened to, translated, and transcribed only in the hospital, after the stay in the village. The interpreter proved again helpful.

After the transcription, the information was analysed, and the first stage in the interpretation took place. Actually, this began already during the translation of the material, whenever the interpreter was asked to clarify or explain certain obscurities.

¹² At one time, this resulted in an amusing situation, when the 'master of the house', who had loaned us his home for an interview with a group of young women, was asked to leave the group. Instead of leaving, he simply posted himself at the other side of the door, in order to follow the discussion.

The eventual results of these group discussions could yield each time a solid 'thick description' of the local perceptions of malaria. Some aspects, however, remained underexposed, and required further research. This took place in the next stage.

Advantages of group discussions at this stage in the research are:

- most of the time, participants felt at ease and appeared free to speak their minds (with the exception of some young women, who remained shy);
- the discussion was always held in the native, local language, and was not interrupted by any translation of questions or answers by an interpreter;
- most likely, this way of interviewing is very appropriate to rural communities such as the one in question: in daily life, the villagers are used to discuss matters collectively, rather than privately;
- the group discussions could lead quickly to substantial insight into the matters at hand;
- the researcher could familiarize herself with a lot of people, which facilitated the making of contacts at a later stage in the research;
- furthermore, it offered the possibility of selecting among the participants possible key informants for the next stage.

Disadvantages of this method are:

- the researcher was not able to follow what was being said, and was in that case at the mercy of the abilities of the moderator;
- particularly at first the groups were too large, and grew even larger during discussions; it was not easy explaining people the use of small groups;
- also, at first the groups were mainly composed of 'important' villagers, who were all eager to meet the researcher and to ventilate their knowledge;
- whenever there was someone present who was evidently higher educated than the others, or who was for some other reason more knowledgeable or respectable, this person could influence the others quite substantially, in such a way that they let him speak out as much as possible and generally took his words for 'the truth';
- the translation and the transcription could only be done after my stay in the village had ended (since there was no electricity on the spot), which meant that the field work could not benefit from more comprehensive insights and questions that instant analysis might have yielded.

4.4.2. Semi-structured interviews

Mostly during the second stage field work, but also to some extent during the first stage, semi-structured interviews were conducted with so-called key informants. These included: teachers, respected mothers, malaria patients or their mothers, local healers, owners of clinics or shops which sold biomedical medicines, and finally the members of the Community Based Health Care-team who assisted the Community Health Nurse in giving instruction and inspecting instructed hygienic measures. In addition, people in the hospital who were involved with the malaria programme were interviewed.

The interviews were conducted at the homes of the interviewees, thus allowing for supplementary information to be obtained through observation. This proved particularly useful when mothers of malaria patients were interviewed; whenever a mother was asked about the

treatment of her child, she was able to amplify her words with an actual demonstration of the treatment.

In order to find malaria patients, each Sunday in church an appeal was made by the researcher to contact her in case of suspected malaria. The interpreters acquainted the researcher with the healers and owners of clinics.

Advantages of these interviews include:

- the researcher was able to ask questions and get the answers herself, allowing for readjustment of the questions whenever they appeared inappropriate due to gaps in knowledge;
- it was also possible to check earlier information that was gathered by the interpreter;
- interviews could be combined (and complemented) with observations.

Disadvantages, however, include:

- since both the interviewer's questions and the interviewee's answers needed translation, the interviews were continually interrupted, which disturbed the 'open' aspect intended for these interviews. Pausing, gesturing and nodding appeared (therefore) not to have the desired effects which the researcher would have expected from home experience;
- the researcher was faced with moral dilemmas from time to time, especially when (mothers of) patients were interviewed. For instance, when clearly a patient was being treated 'wrongly' or insufficiently, but also when it was obvious that the parents of a child could simply not afford sufficient treatment. The researcher once entered into such a matter, and explained to the mother of the family she was staying with that her daughter needed to complete her cure of chloroquine. However, this advice was not followed.

4.4.3. Observations

The observations can be arranged roughly into two groups: those concerning the treatment of (malaria) patients, and those concerning daily life and its customs and rituals. The latter took place during the entire period of research, but particularly during the second stage field work. The former took place during this second stage only.

The aim of these observations was to supplement the information from the interviews, while they often also provoked questions which were then discussed with the villagers or the interpreter. They were noted as much as possible.

4.5. Procedures of control on objectivity

Several procedures of control were carried out in order to ensure as much as possible both validity and reliability, the two principal criteria for assessing objectivity in (qualitative) research (Nieuvaard, 1990). In this paragraph the main procedures will be noted, as well as those which, for a number of reasons, could hardly if at all be applied in this research. In chapter 9 I will return to this matter in order to answer the question of the validity and reliability of the information in this study.

(a) *triangulation of sources* (Hutjes and van Buuren, 1992; Nievaard, 1990)

Information obtained from group discussions was supplemented and checked in conversations with others, both in the village community and in the hospital, by means of group discussions, talks and semi-structured interviews.

In addition, the results of the research were compared with insights found in the literature. These concerned both similar studies in Uganda and more general insights from anthropological studies in Africa.

Generally speaking, no contradictory information was found, apart from the fact that biomedical ideas flourished more in and around the hospital than elsewhere.

(b) *triangulation of methods* (Nievaard, 1990; Swanborn, 1987)

At the same time, the information gathered from the group discussions was checked with the use of other methods: individual (semi-structured) interviews, observations, and informal conversations. No quantitative methods, however, were used.

This is where information obtained from observations regularly happened to differ from information from interviews: especially the mentioned (biomedical) possibilities of prevention were mostly ignored in practice. Neither could the often propagated "We have to take the full dose of chloroquine" be confirmed through observations. Otherwise, the data gathered from different methods mutually confirmed, amplified and clarified themselves.

(c) *triangulation of interpreters*

After having worked with one interpreter, who was able to give ample explanation and supplementary information, I considered it a sensible idea to use other interpreters as well with the interviews. Not that the first interpreter did not appear capable enough, on the contrary, but I wanted to be careful not to follow him too blindly in his translations and explanations. Only afterwards (after the experience with the two ensuing interpreters) did it become evident that with the aid of the first interpreter information was easier to come by, which by the way differed little from the information gathered during the second stage field work.

(d) *member check* (Wester, 1991)

Both the information gathered from the interviews and the observation data were continually presented to the respondents. This was done both in the interviews themselves (for instance, by presenting recaps or by putting the same questions differently), and afterwards, after analysis and interpretation of the research data. It was not possible, however, to get feedback on a more higher level of abstraction from all the respondents, as I have noted earlier.

(e) *peer debriefing, or researchers' triangulation* (Hutjes and van Buuren, 1992; Wester, 1991)

Since the researcher was the only researcher active in the area and thus lacked the presence of any peer researchers, it was hardly or not possible to use this procedure of control. Nevertheless, she did try to share her insights and speculative interpretations as much as possible with the hospital's chief of staff and the supervisors in Uganda and the Netherlands. Often, they recognized the findings.

(f) *theoretical sampling* (McCall and Simmons, 1969; Nievaard, 1990; Wester, 1991)
The external validity, i.e. the extent to which the findings may be generalized, could hardly be checked through theoretical sampling, since the research was restricted to one place only. Whether the local findings support general validity cannot, therefore, be inferred from this perspective. It was possible, however, to compare data with information gathered earlier from the hospital group discussions; this produced no clear differences. Also, as noted earlier, a comparison was made with information from the literature.

However, theoretical sampling was indeed done within the community: precisely those research units were chosen which would yield, from a theoretical point of view, relevant information (for example traditional healers). This would benefit internal validity.

Of all the procedures of control available for qualitative research, only some could actually be used. This was caused by practical circumstances, which the researcher just had to accept. Complete validity and reliability cannot, if only because of the necessary mediation of the interpreters, be guaranteed. Nevertheless, validity and reliability was aimed for as much as possible.

4.6. Description of the area and population of research

Uganda is a small country, almost four times as big as the Netherlands. It is situated on the equator, in Eastern Africa, and is surrounded by other countries, including Kenya, Zaire, Sudan, and Rwanda. The estimated number of inhabitants amounts to 17 million, the population growth is 2.7% (Kengeya-Kayondo, 1993). The women slightly outnumber the men, and the women of fertile age together with the children account for more than half of the population. Over the last fifteen years, seven children are born per mother on average; in rural areas this percentage is slightly higher than in urban areas. Sixty percent of Ugandan women have their first child before their twentieth birthday. Illiteracy in adults is estimated at 45%; 35% in men and 55% in women. Approximately 12 to 15% of the rural population has access to 'safe' water, i.e. protected springs, wells and boreholes. In the urban population the corresponding figure is approximately 70%.

In Uganda, there are relatively few public health facilities: 81 hospitals and 105 health centres (see appendix 1). It is estimated that only 30% of the population live within reasonable walking distance of a public health facility. Health care programmes which are carried out in the country include: Mother and Child Health care, in particular vaccination of children, Diarrhoea Disease Control, and the AIDS Control Programme. Plans are being made to decentralize most government programmes, including public health.

The high rate of perinatal mortality (115 per 1000 children born alive) and the maternal mortality (5 per 1000) are clear indications of the relatively bad state of public health in the country.

In 1986, the present president, Museveni, and his government (the National Resistance Movement) have introduced an administrative and governmental system which exists at 5 levels: from the Resistance Council I (RC-I) at the lowest level to the RC-V at district level. Its

members are chosen by the people. Parallel to this an old structure of 'chiefs' has remained; these are appointed, and act as principals.

The research was carried out in the Rukungiri district. This is a relatively densely populated area in the rural south-west of Uganda. The health care is governed by the head of the District Medical Office (DMO). There are two hospitals, one of which is Nyakibale Hospital (see also appendix 2).

Nyakibale Hospital was founded in 1963 by the Franciscan Sisters of Breda (Netherlands). It has since expanded to a hospital with 200 beds, and is presided by the bishop. There is a public health centre and a protestant health centre nearby (Kaharuza, 1993).

The hospital is fairly easy accessible: there are unmetalled roads, for an eight hour's drive (400 km) to Kampala, the capital. It is rather more difficult to reach by phone. Electricity and water are intermittently available.

The local indications of health care do not differ substantially from the national indications. In 1992, 40% of the out-patient clinic's patients had malaria. Among the patients of 1991, the three most common diseases were: malaria (36.7%), AIDS (6.1%), and pneumonia (4.8%) (Kaharuza, 1992; see appendix 3).

In 1990 the Community Based Health Care-project was started at nine locations, Kahoko among them. Kahoko is the only community actively participating in the programme, and that is why it receives special attention.

Kahoko is situated at a distance of approximately sixteen kilometres, or a one and a half hour's drive, from the hospital. The precise extent of its surface is unknown, but it is the most densely populated village in the area. It has a population of 5025, of which 2605 are women. There are 858 households. There are two primary schools, and two churches (catholic and protestant). There is no electricity, nor is there any running water, and nobody owns a car, while some have bicycles. The village is rather different from what Dutch people would expect a village to look like: there is no real centre, although a slight increase in the number of little shops and bars around the church and the primary school can be observed. The village is subdivided into 'quarters', each with its own name, often its own church (protestant or catholic), sometimes its own school, and not infrequently a bar and/or a shop. The people live on their own small pieces of land, which are scattered across the area and are usually accessible only on foot. Most people are farmers: they work their land for their own consumption. Some have an extra job: teacher, carpenter, construction worker, traditional healer, or bar/shopkeeper. It is mostly women who work the land, gather wood, cook, and wash. Many husbands spend the day drinking 'tonto' (banana beer) in the company of others. Most people are christians (catholic or protestant); the 'old gods' have been forsaken, banished or 'burned'. Polygamy exists, but most young men have 'only' one wife. Older and richer men sometimes have two or more. The population consists of 'clans', or families. Certain rules and taboos are associated with clans; for instance, marriage within the clan is not allowed, because it is considered as 'incest'. As a rule, the sons remain to live within the family and the village, and need to find a wife from outside the clan (and thus usually from outside the village as well). Daughters are therefore 'lost' to husbands from outside the village, while sons and grandchildren remain to live inside the village. For daughters a dowry is asked, which varies from two to ten cows. Most people cannot afford such large dowries, which is why many couples are married 'illegally'. Since there are more girls than boys, it is not difficult for a boy to find

himself a wife. Girls, on the other hand, are sometimes afraid of remaining unasked. Particularly for girls who have had higher education, and thus require relatively large dowries, this fear can be very real. A woman who remains single is considered as a great shame to the family. Worse still, however, is when a married woman remains childless. Elderly people are highly regarded; both grandmothers and grandfathers are very much respected. Social life revolves around community events: the church, a wedding or a funeral, the bar, and (for women) the land. The ties within the community are strong: not only because almost everybody is related, but also because many people are indebted to other people, for instance for unpaid dowries or money borrowed for hospital visits or school-fees. Especially the latter is a considerable burden to people, and all the more reason for not giving the girls too much of an education. Children who 'do well', who earn a lot of money, are expected to make a contribution to the family. Furthermore, people have very little spare time; people are always working, if not on the land, then at home, braiding baskets or plaiting mats. The drinking men excepted, of course. Also, people are very rarely alone, and most matters are discussed in groups.

As noted, elderly people and men are in highest regard, but also the members of the RC-I and RC-II. In Kahoko, which consists of two parts, there are two RC-I managements, while the RC-II management covers the whole of Kahoko. These managements are also employed by the hospital and its CBHC-team, to mobilize people and to urge them to cooperate with the health care-projects.

Information on the focus group discussions (per quarter) is given in chapter 5, sections 5.2. and 5.3.

5.1. Introduction

In this chapter a summary will be given of the group discussions which took place both at the Nyakibale Hospital and in the village of Kahoko itself.

At the hospital, during the week of May 19 to May 24 1993, three group discussions were held with (a) a group of male assisting staff, (b) a group of mothers who came to have their children vaccinated, and (c) a group of pregnant women who came for pregnancy control.

The aim of these discussions was three-fold: Firstly, the results of the discussion would give the researcher a general idea of the topics that would be dealt with later on, during the actual field work. The list of topics could thus be adapted. Secondly, these discussions would yield the possibility of comparing the perceptions of this 'hospital group' with those from the group discussions in Kohoko, which were yet to take place some weeks later. Finally, these discussions were also meant to train the interpreter. He would thus be able to internalize the aims and methodology of the research, in order to be better prepared for the actual field work.

In Kahoko, during the week of May 27 to June 1, eight group discussions were held with different groups of men, elderly women, and young women, each group from a different part of Kahoko.

The results of these two sets of interviews turned out not to differ substantially. They will therefore be discussed together. The quotations will mostly be from the groups in Kahoko, except for markedly different or new views propounded by one of the hospital groups.

After descriptions of the research population (5.2.) and of the procedure of interviewing (5.3.), the results of the discussions will be discussed along the lines of four main questions: how is malaria recognized (5.4.), what are its causes (5.5.), how can it be treated (5.6.), and how can it be prevented (5.7.). Each time it will be indicated where gaps in knowledge or understanding occurred, which needed filling in during the next stage of this research. An analysis of the results (5.8.), as well as an attempt at understanding the perceptions from the prevailing culture's point of view (5.9.), concludes this chapter.

5.2. Description of the research population

The group of male assisting staff was the first group to be interviewed. The group consisted of eighteen men ranging in age from 37 to 57. Most of them did not speak English, or in any case not fluent enough to be able to discuss in English. The duties of the men ranged from cleaning and doing the laundry to mowing the grass, carpentry, and painting.

The group of mothers visited the hospital to have their children vaccinated and to receive some instruction from the Community Health Nurse. It comprised nine women ranging in age from 19 to 36. All of them work the land, as 'cultivators', or farmers. They come from different villages surrounding Nyakibale.

The group of pregnant women came to the hospital for pregnancy control. It consisted of eight women ranging in age from 20 to 33. Most of them work their land and live in one of the villages surrounding Nyakibale Hospital. One of them, however, is a teacher who lives in the town of Rukungiri.

The eight groups from Kahoko, a village which is situated sixteen kilometres from Nyakibale Hospital, come from five of the many different villages or quarters of Kahoko. Two group discussions were held in Mutooma: one with a group of women aged between 30 and 66, and one with a group of men aged between 35 and 60. One group discussion with women aged between 42 and 52 was held in Kinyamahwa, and one with women aged between 22 and 32 in Kantojo. Two discussions were held in Nyakagyeme: one group of women aged between 30 and 48, and one group of men aged between 45 and 80. Finally, two group discussions were held in Kahoko itself; one group consisted of men aged between 43 and 61, and one comprised women between 42 and 72. The age of the participants, however, was not always known.

table 5.1.: Distribution of age in the various groups which participated in the group discussions.

	women	men
hospital workers	-	37-57
mothers hospital	19-36	-
pregnant women	20-33	-
Mutooma	30-66	35-60
Kinyamahwa	42-52	-
Kantojo	22-32	-
Nyakagyeme	30-48	45-80
Kahoko	42-72	43-61

The size of the groups ranged from eight to fifteen people; the groups usually started with eight people, but tended to expand with people coming in later. The male groups in Kahoko and Mutooma consisted mainly of higher educated people (particularly teachers, as well as a few catechists). The other groups were more of a mixed kind, in regard to education as well as status, in which most people were less educated. Almost all of the women are farmers by profession, while most of the men also work the land.

Kahoko is one of the villages which is visited bi-monthly by people from the hospital, who come to vaccinate and to give health education. Furthermore, the Community Health Nurse pays house-to-house calls to check hygiene and give advice. In Kahoko itself a health care-team has been organized, called the Community Based Health Care-team. Its members help out with education and general improvements in the local health situation, and are assisted by the Community Health Nurse, who gives them separate trainings. Penalties are also used as a means of maintaining and improving health and hygiene conditions in the village. This Community Health Care-system has only been started recently, in June 1990 (Kaharuza, 1992), and is still partly in the developing stages.

The nearest clinic is in Rwerere, a small town about four kilometres away. Aspirin and chloroquine are on sale in the local shops of Kahoko. A male nurse was also to be stationed in Kahoko, but during the first field research his clinic was not yet operational. The nearest hospital is Nyakibale Hospital, a three hours' walk. Sometimes there is public transport an hour's walk outside the village.

The five 'quarters' in which the group discussions took place actually form two sections: Kahoko and Mutooma at one side of the hill; Nyakagyeme, Kinyamahwa, and Kantojo at the other. Each section forms a sub-municipality of Kahoko: Kinyamahwa at the other side of the hill, and Nyakabungo at this side. I stayed in the quarter of Kahoko, near the primary school, with one of its teachers and his family.

The villagers' economic activities consist mainly of working the land for their own consumption. It is mostly women who work the land. Matooke (plantains), maize, millet, cassava, beans, and tomatoes, among other things, are grown. 'Tonto' (banana beer) is brewed for local sale, and also 'waragi' (banana gin) is distilled. During the field research, there was plenty of food, because the rains kept falling. For this reason the produce of bananas was sufficiently large for tonto, which cannot be made at times of food scarcity. Because the seasons are important to the community for the production of food, they will be schematized below, where for each season the harvest time and sowing time of the various crops will be specified. Later on, it will be shown that the 'malaria seasons' can also be related to these seasonal changes. Moreover, the scheme may serve as background information, in order to put some of the quotations into perspective. The busiest months are February and September: during these months the land needs to be 'prepared' for the sowing of millet and other crops.

Table 5.2.: The activities on the land over the four seasons.

long rainy season (Sep.-Dec.)	short dry season (Jan.-Feb.)	short rainy season (March-May)	long dry season (June-Aug.)
sowing of maize, beans, millet and peanuts	mangoes are ripe; harvest time, first for millet, then for maize, beans and peanuts	sowing of beans, sweet potatoes, peanuts, and possibly maize	mangoes are ripe; harvest time for peanuts, beans, sweet potatoes, and possibly maize; weeding the land for millet

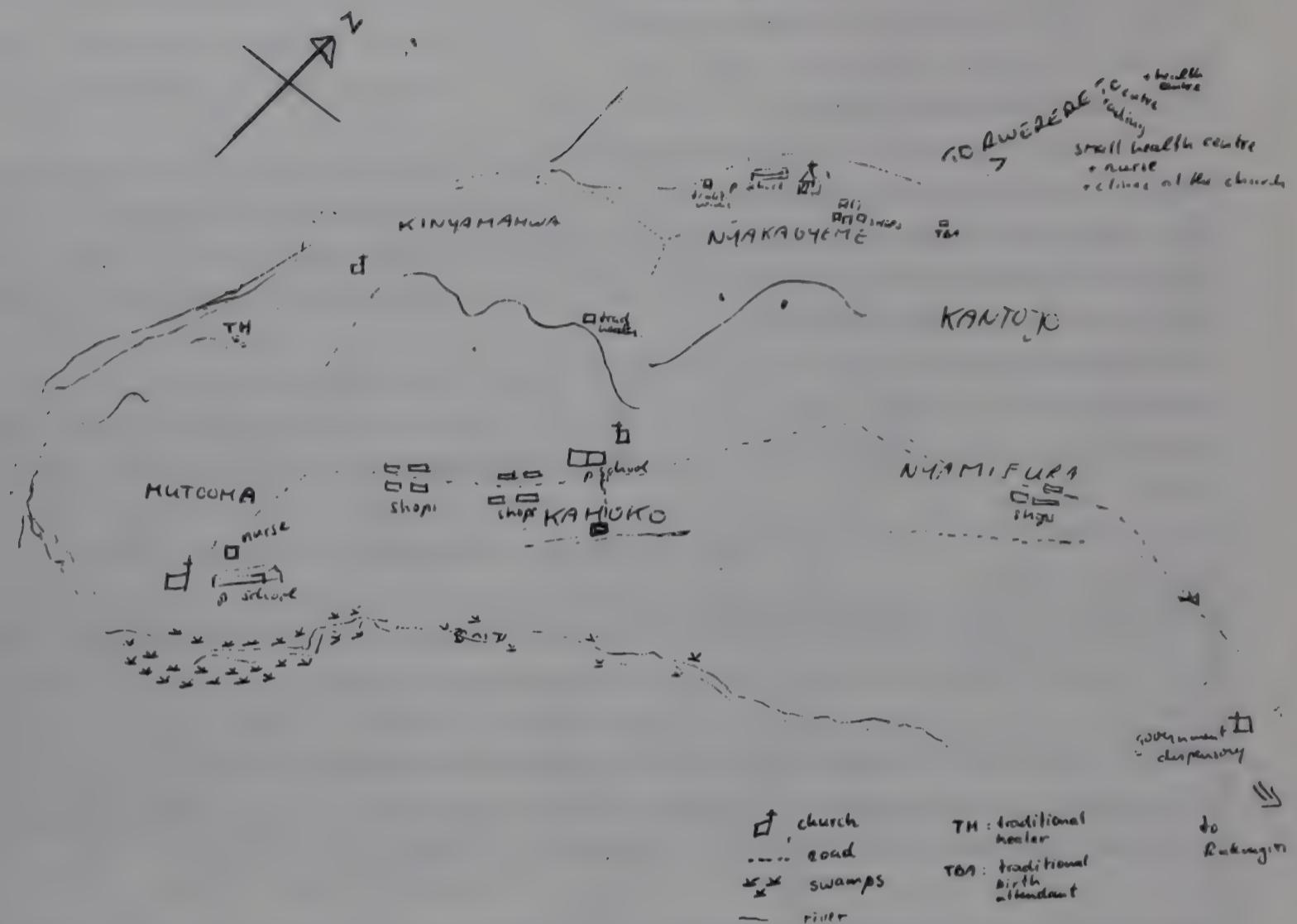
Besides land, most people own some of the smaller livestock: chickens, goats and sheep. Only the 'richer' farmers own cows, for the production of milk, among other things.

In the shops, besides medicines, some groceries are on sale: tonto, waragi, soft drinks, salt, soap, sugar, matches, and sometimes tomatoes and bananas.

The geography of Kahoko is roughly indicated on the map on the next page.

Zaire

Lake Edward



5.3. The process of interviewing

The interviews at the hospital were invariably taken by Benon, the interpreter, and Skola, the community health nurse. Benon is a carpenter, aged 37, the father of four children, and lives in Rukungiri. He is a native of the area, but was hardly familiar with the people of Kahoko. He speaks fluent English. He is a very religious man, and has his own fellowship, where he preaches frequently. Skola is a trained nurse, aged 40, and a widow with four children. She is in charge of the Community Based Health Care-programme. Both at the out-patient clinic and in the surrounding villages she offers education and, with the assistance of a team, vaccinates people.

Benon twice led the discussions at the hospital while Skola took notes; once, when the group of mothers was being interviewed, they reversed roles. I was slightly dissatisfied with Skola, who spoke a lot of the time and often changed the subject, thereby causing the answers sometimes to be a little confusing. Benon also spoke a lot during the first half of a discussion, but he gradually managed to reduce his role simply to steering the discussion. In the beginning I had to get used to my own role: of course I could not follow the discussions directly and I did not want interrupt all the time. We often arranged for the last ten minutes for me to ask more

specific questions. My task was also to observe and to take notes of the group process, which would later be discussed. The interviews were recorded on tape and were translated the same day by Benon, while I transcribed them verbatim.

In Kahoko, all discussions were led by Benon. The primary school's headmaster, Bernard, assisted with taking notes. These notes were sometimes a little disappointing; particularly at first, the teacher only noted those answers which he considered to be 'correct'. Although this improved somewhat later on, he kept making very concise notes, which did not allow for any depth or understanding. The answers to the questions were noted, but their context was omitted. This is why I did not want him to lead any of the discussions. Fortunately, the quality of most of the tapes turned out to be good, so that all tapes could be transcribed. This was done during the week after the interviews, since there was hardly any opportunity to do this directly, both for practical reasons of time and the lack of electricity. However, the three of us did discuss and supplement the notes immediately after each interview was done.

During the interviews, it was striking that especially young women often appeared reticent, particularly at the beginning of an interview. The men and the older women, generally speaking, did not show such diffidence. The young women often asked us to speak to them, instead of the other way around. Benon would then explain to them why we did not do it that way. One group of women, the one from Mutooma, was so shy and giggly, that we suspected a conspiracy. Except for one woman (who joined the discussion later), all women gave us the same standard answer: "We don't know, you tell us." Eventually, they did manage to provide some other answers as well. The incident clearly illustrated the disadvantage of my not speaking the local language. Only at the end of the discussion did I understand, from the interpreter's words, what was going on. And yet, this was also an instructive moment: from now on, we explained the purpose of the discussion more carefully right at the beginning, and also told the people that the instruction would be given at a later date, by the community health nurse.

Striking differences in education were observed both between and within the groups. Certainly at the beginning of the research, the groups were attended by all the 'respectable', well-educated members of the village community. They tended, more than others did, to focus on the 'biomedical perspective' in their answers, for instance by mentioning the mosquito as cause of malaria. Later on, at my request, people with less education were asked to attend these discussions. This, however, did not always solve the problem; sometimes, when only one or two well-educated respondents took part in the discussion, they tended to dominate the others in the group. One case clearly illustrates this effect: in Kahoko the discussion was started with only one respondent (since the others did not show up until much later), who completely adjusted his answers to the question of how he thought malaria is spread, when a teacher who joined in later explained that malaria can only be caused by mosquitoes.

'Well-educated' respondents mostly had had primary education, and a few years of secondary education. The majority of participants, however, had had either no education at all, or only a few years of primary education.

5.4. What is 'omushwizha'?

Malaria is called 'omushwizha' in Runyankole, the local language, which literally means fever or increase of temperature. The other way round, omushwizha was also equated with malaria, although this could be confirmed only by people from the hospital or by well-educated people from the village. However, the translation of the word malaria into the local language, a necessary first step in the field research, cannot be considered as unproblematical. As became evident later on in the research, these terms are not at all interchangeable. Nevertheless, it was decided upon that this would be the starting point of the research, in order to link up as much as possible with the conceptual frame of reference and the experience of the community in question. At a later stage it will be evaluated how these concepts are related.

In this section, first the symptoms of omushwizha (or how to recognize it) will be discussed. Next, the question of how to differentiate omushwizha from other diseases will be dealt with.

5.4.1. The symptoms of 'omushwizha'

When the participants were asked how to recognize omushwizha, they came up with a set of various symptoms: headache, shivering, feeling hot, feeling cold, dizziness, sweating, 'broken' or weak joints, 'broken' back, coughing, shortness of breath, total indisposition, anorexia, and a bitter taste inside the body or in the mouth. These could manifest themselves separately or combined.

"At times, you may be there and then you get headache, after the headache, then you get cough, then the fire in the body becomes too much. Then you get cold and get the fire and then you really feel you are really getting finished because of the headache, and then we also come to conclude that this is omushwizha." (old man Mutooma)

"Now with us here, you start by being cut, cut in the joints. Then you break your back, get cold, then you get much fire, the temperature goes up. Then you cough, that's how one can think that it is omushwizha." (old woman Kinyamahwa)

"The signs which show that it is omushwizha, you'll be there and when you are being caught, you start feeling cold, then when the cold enters you, from the feet and all the joints, you get cut, cut. You feel them all getting weak. Then, it continues and the back gets broken, the hands also become like this, then you are there in the space, you become weak. Then there, at times you make fire, you make much fire, but you who is making it, you feel you are cold. You continue feeling cold. Then at times you get nausea and at times you vomit. But then there is one who may not vomit, but then you find he is cold and shivering." (old woman Kahoko)

"The way I fell sick of it, I would shiver, then in one hour I would feel all the life getting warm, then I would sweat, and thereafter I would start shivering. Then I would vomit and then get dry, I would want to drink now and then, but whatever I would drink, I'd return it." (old woman Kahoko)

"Even the mouth, the whole mouth gets bitter. When you try to eat food, you taste every food very bitter. (...) You can't taste the difference of the banana and the sweet potatoes." (old woman Kinyamahwa)

"There is another way it got me previously, when I would be there I would hear in my head drums. Then I would be as if I'm scared and I lost all the strength." (young woman Nyakagyeme)

"And when you go to urinate, your urine will be like ehongwa (a bright yellow flower). Then you get to know that this is omushwizha and there is nothing else." "There is when it makes you vomit, you vomit things like eshwiga (a greenish herb), then you know that this is omushwizha." (old men Mutooma)

"Another thing we can add, the person who has omushwizha, when he goes to urinate, he will urinate yellowish urine. Going to defaecate, he'll have constipation. It will be hard even to fall of. That means it has entered deep in the stomach and it has dried him. We can also know it from that." (old man Nyakagyeme)

Most of the symptoms seemed familiar, since malaria is a disease which can display a great variety of symptoms. Sometimes, however, the enormous diversity of symptoms seemed staggering, and omushwizha appeared to be almost synonymous with 'illness'. One of the mothers summed it up very well:

"Now these days we really call all omushwizha, even that one which is not omushwizha. Whichever way you get caught, you call it omushwizha. So when you go to the hospital, they examine you, they are the ones who can tell you what you are suffering from. Because with us, whatever sickness comes, you call it omushwizha. Even the selimu¹³ you call it omushwizha" (mother)

Many diseases and/or symptoms are indeed headed under this label of 'omushwizha'. In addition, different types of omushwizha are recognized:

"So it really seems as if it has two types: that one which comes with coldness and that one which comes with heat." (mother)

"But then another one that is attacking you and you feel your eyes want to drop from your head, you really feel bad."

"There is an omushwizha also which comes and then it starts breaking all your joints, it will go to your back and breaks it."

"There is another omushwizha which gets you and then you even become mad." (workers)

"There is one which comes with headache, there is another one which comes with vomiting." (old man Mutooma)

"You would see one with the omushwizha of the head, it would do him bad and then you'd see the one of coldness." (old man Mutooma)

"There is omushwizha which breaks you, you feel all over you are getting broken, then you fall sick, or there is one which gets you starting in the stomach, or in the head." (old woman Mutooma) [quote]

These characterisations, however, are not unequivocal. Different respondents named different types, but for some it was all just one kind of omushwizha.

"The one of vomiting and diarrhoea, at times you recover faster, but all we call it omushwizha." (old woman Mutooma)

"Is is all omushwizha, it will get you the way it wants." (mother)

¹³ 'Selimu' is a, nowadays common, Ugandan slang for the English word 'slim', which indicates loss of weight and refers to the disease AIDS.

Apart from these symptoms, omushwizha also has one particular characteristic, namely that it is contagious. The transmission from one person to another proceeds via the air, or breath ("sharing the same air"), sweat or touch, and also through sexual contact. Furthermore, mothers may pass omushwizha on to their children through mother's milk, or even earlier, during pregnancy ("by sharing the same blood").

"Now we no longer get good air, so we share the breath (...), omushwizha is contagious, when you get it, your entire family gets it. Even the neighbours get it. By breathing it is spread." (old man Nyakagyeme)

"Now you, an old person, when your heat mixes with that of the young ones, then all of you get the same sickness." (worker)

"Can omushwizha affect newborn babies?"

"Yes, through sucking. The mother's milk carries that heat of omushwizha. But also through birth." (pregnant woman)

"Now if you are sleeping with your friend, the fire which would be burning in you, or the sweating, as the fire keeps burning in you, and you sweat, now when that sweat leaves you and goes on to the other one, and your fire, which has been leaving you, when it goes to him, there he also gets caught by omushwizha." (young woman Kantojo)

"If you are sleeping with him, you know that actually you smear the omushwizha to him." (old woman Mutooma)

"When he falls sick of omushwizha and he joins himself to his wife, he'll pour in her those germs, and when they produce a child, after it has two, three weeks, it falls sick of omushwizha." (old man Kahoko)

To conclude: All of the respondents are familiar with omushwizha, and are quite able to recognize it. Omushwizha has various symptoms, such as fever, shivers, headache, and vomiting, which occur singly or in combination.

Various types of omushwizha are distinguished, although apparently no clear agreement on characterisation existed. Some people spoke of 'cold' and 'hot' kinds of omushwizha, whereas others distinguished between a 'headache' and a 'diarrhoea' variety. These characterisations do have in common the fact that they are classified into categories of (additional) *symptoms*. In addition, omushwizha is said to be contagious, which according to the biomedical point of view is impossible.

The symptoms mentioned do correspond with those mentioned in the biomedical literature. Yet a difference between omushwizha and malaria seems to exist, which can already be observed in the respective names: 'fever' (a symptom) appears to be a much wider concept than malaria (a disease), which refers to one particular disease. This will also be discussed in the next subsection, in which the relation between omushwizha and other diseases will come up for discussion.

Items which are still unclear, concern the characterisation of omushwizha: are there indeed various kinds, and are these invariably related to additional symptoms? But then again, how does this tally with remarks about all symptoms expressing basically just one kind of omushwizha, and that "it catches the way it wants"? Is the difference of expression caused by the omushwizha itself, or by the person who contracts the disease? In the following part of this report, some attempts at answering these questions will be made.

5.4.2. Omushwizha among other diseases: how can it be discerned?

Although all respondents were quite able to recognize and describe omushwizha, it sometimes remained difficult to distinguish between omushwizha and other diseases from the traditional medical system, especially in children. These other diseases are called 'traditional diseases', which according to some can only be diagnosed and treated within the traditional circuit. They are called 'ebiankole', which refers to diseases of the Ankole, one of the tribes from the area of research. Ebiankole are diseases with 'strange' symptoms, such as convulsions or epilepsy.

One of these diseases, 'omuraramu' (literally: the one who makes you look upward, i.e. the equivalent of biomedical meningitis), borders between omushwizha and other diseases. It was mentioned as a kind of omushwizha, or as an effect of omushwizha:

"Now maybe another one we see, is that one which brings omuraramu. That one which gets you and twists your neck. Then you go, they'll tell you it is omuraramu, then they say it's a result of omushwizha, it comes with the omushwizha. (...) Or others say that it is ebiankole. When it gets you, we try to look for these local herbs." (worker)

Also 'rokaka' (the yellowing of the eyes, body, urine and vomit) was mentioned as a symptom, effect or kind of omushwizha, as well as being a distinctive disease.

"We have many sicknesses, we have rokaka: it makes your eyes yellow, your urine yellowish. And then when you go to the hospital, they tell that this is omushwizha they call rokaka, then you go to the hospital, they give you treatment, they say it's omushwizha." (worker)

And finally, 'senyiga' (cold) was also mentioned as precursor, kind, but also symptom of omushwizha:

"But there is another one which passes through senyiga." "In the head you get senyiga." "Then that senyiga then becomes omushwizha. You get the omushwizha and it really finishes you." (young women Nyakagyeme)

"How does it get you?" "You get senyiga, headache, then coughing, then you become weak and you get cold, then you get omushwizha." (young woman Kantojo)

Although the dividing line between omushwizha and these other diseases (rokaka, omuraramu and senyiga) is still unclear, the difference between omushwizha and 'engundu' is much more pronounced. Engundu refers to 'something inside' in young children, which may cause 'ebiyaga' (convulsions). So if a child (up to the age when it learns to speak) suffers from ebiyaga, or convulsions, this may be caused by engundu. But the name of ebiyaga is not always pronounced, because naming the disease may actually aggravate its progression. Instead, the convulsions are called 'ebiankole'. Besides engundu, 'false teeth' may also engender symptoms which look like omushwizha. Just like engundu they can only be diagnosed and treated within the traditional medical system, as one of the pregnant women clearly demonstrated:

"In fact you can't get a way of understanding the children's sicknesses, they have become many and they are confusing us: at times the child wakes up with high temperatures, at times you will find it is engundu, which doesn't require medical treatment. If you bring that child here, they tell you it is omushwizha and when they give the child an injection then the engundu overpowers the child and it kills it. Or at times it is false teeth (they look at the gum and they see as if a tooth is coming, so what they do they go and extract it, or rub the medicine there; a false tooth will kill the child, because it gives diarrhoea and high temperatures), those are

sicknesses which resemble omushwizha. Because false teeth also can bring raising temperatures, then it gets diarrhoea, it starts vomiting and then you begin to think that it is omushwizha. and you say: 'Let me take the child to the hospital.' Now when you take him to the hospital, they will inject it, and if it is engundu, it will just go beyond the treatment (beyond where it can be treated), if you have not given it the local herbs. Therefore the omushwizha of the baby, you can't understand it very quickly. The child who has at least grown to a certain age, is the one you can't get worried about that it is engundu. (...) Me, I think when you bring the child to the hospital and they examine him and see him and they give it the treatment if they see there is no improvement, if you know that you always get your children affected by native sickness, you yourself you perceive it. Then you try to look for the herbs. It doesn't mean that when you are here in the hospital, you don't use the native medicines. They use them, only that they hide them from the doctors."

So far, only those diseases have been discussed here which were brought up spontaneously in the group discussions. During the next stage in the research, the questions were directed more specifically toward diseases with symptoms similar to those of omushwizha (for instance worms, which also may cause diarrhoea and vomiting).

"We have another sickness of enjoka (worms). You get your whole body, all of it, becomes swollen. They itch me and in the heart they pain me." (old woman Kahoko)

The discussion will be centred upon the question of how these diseases, as well as those mentioned earlier, are related to omushwizha, with regard to symptomatology, causes, and possibilities for treatment and prevention.

For the moment, it will suffice to say that on the one hand omushwizha appears to be synonymous with malaria, in view of the shared symptomatology, but on the other hand it may also be a more restricted concept than malaria. For the traditional diseases mentioned are not comprehended within our biomedical system, and might well be included under the umbrella concept of malaria. Of course, fits of fever, convulsions, jaundice, vomiting, and diarrhoea are also symptoms of malaria. However, they may also be indicative of other diseases, including epilepsy, typhoid and hepatitis.

In addition, it became clear that omushwizha may refer to other diseases than malaria, such as omuraramu (meningitis) and rokaka (jaundice). Within the biomedical system, meningitis is distinctly different from malaria, while jaundice may be caused by both malaria and other diseases, like hepatitis and yellow fever. The conclusion would have to be that omushwizha is a wider concept than malaria.

Table 5.3.: Omushwizha and malaria, subdivided into a number of symptom.

	omushwizha	malaria
malaria symptoms	+	+
omuraramu symptom cause	+	+
rokaka symptom cause	+	—
engundu	—	+/-
'false teeth'	—	+/-

+ means: is part of; — : is not part of; +/- : is possibly part of.

The fact that omushwizha, apart from being a more restricted concept than malaria, can on the other hand also be seen as a wider concept, will become evident in the discussion of its causes. This will be the subject of the next section.

5.5. The causes of omushwizha

If during the discussion of symptoms malaria and omushwizha could still be seen as more or less synonymous, the two concepts seemed to diverge when the research shifted its focus toward the causes. The symptoms, however diverse, are still more or less alike. However, while in the case of malaria just one cause is indicated from the biomedical system, in the case of omushwizha many causes were mentioned. Some people said that they did not know what causes omushwizha, but many mentioned one or more of the following causative agents: unboiled water, bad water, (unboiled) milk, mosquitoes, flies, dirt, rain, cold, heat, wind and dust, the eating of maize, mangoes, pineapple, sugar-cane (especially from 'foreign' places), the sunshine, and even the heat of the gunfire in Rwanda. Besides, a number of predispositions was indicated, factors causing increased susceptibility.

For clarity's sake, these causative agents are classified into five groups:

- a) cause unknown
- b) omushwizha caused by 'bugs' (mosquitoes, flies)
- c) omushwizha caused by the taking of certain food or fluids (unboiled water, maize, mangoes)
- d) omushwizha caused by weather conditions (heat, cold, rain, wind and dust)
- e) personalistic explanations
- f) predispositions

Ad (a) cause unknown: Several times the respondents indicated that they did not, or could not, know the cause. Omushwizha then appeared to occur out of the blue:

"Anyone who might be knowing what causes this omushwizha?" "I think it just brings itself, you may be there and you just find yourself being caught by omushwizha, it just comes when it wishes." (old woman Mutooma)

"With the omushwizha it just chooses the body (person), even when you are at home, you can shiver and just find yourself being caught." (pregnant woman)

"Or at times you may be there and it catches you just like that." (young woman Kantojo)

"I can't say that it is the one which brings it, but whether the omushwizha will be waiting for you, I don't know." (young woman Nyakagyeme)

"All the same I would have caught the omushwizha, because I feel it in the body, as if the body would be beating itself, maybe my body would be wanting to be sick." (old woman Mutooma)

Even though 'cause unknown' is not in fact a cause, it is given here, since this category may have implications for (the belief in) prevention.

Ad (b) omushwizha caused by 'bugs': Mostly mosquitoes were mentioned in this category, in some of the cases also flies. The mosquito was said to cause omushwizha by producing a swelling, but sometimes its effect was said to be unknown. The fly was mentioned for its habit of visiting 'dirty spots', such as latrines, cow-dung, or compost. If the fly then landed on food, it would transmit omushwizha through the dirt on its feet.

"Others say that omushwizha is brought by mosquitoes."

"Now I think omushwizha is brought by mosquitoes. Mosquitoes come from the bush; or the water, we don't know." (workers)

"If you have a compound which you don't thrush, and the compost pit is just very near, you must suffer from omushwizha, because the mosquitoes will be there and also the flies."

"When the mosquitoes are many and they bite you, you must fall sick of it." (pregnant women)

"Because when that mosquito bites you and puts in you omushwizha, you would find your strength small, but otherwise as we know, the mosquito when it comes and bites a person, it makes you sick of omushwizha." (old man Mutooma)

"How do mosquitoes cause omushwizha?" "Mosquitoes, when the mosquito bites you, that is what makes the blood dilute, when that blood gets bad, then you start getting cold, then headache, then shivering all over." "These mosquitoes which bite you, they have sicknesses with it, it has its poison, which it pours into you." (old men Nyakagyeme)

"With us, we think when it comes and sits on you and it finds you in the bed and it bites you, then I think that's when the omushwizha comes." "When it bites you, then you get omushwizha?" "Yes. But when it bites you, then you scratch yourself and then you start feeling pain, will the germs which it has put in you, not having entered into you?" (young woman Kantojo)

"When you step in (the water), there might be mosquitoes and they bite you at times. Don't you think, if they bite your legs, won't the omushwizha bite through? Even when you are putting on shoes, won't they come out and bite? (young woman Nyakagyeme)

"Those who use the bush, then we see flies use that way to bring the omushwizha. Which means that we can get omushwizha through the flies." "And also in the latrines. When it is about to fill up, then the flies keep going there and coming back to sit on your food. And when you eat that food, you have to become sick." (old men Nyakagyeme)

"When you go to a place where there are those ticks, when it bites you, (...) me I think it also brings it." (old woman Kinyamahwa)

Ad (c) omushwizha caused by the taking of certain food and fluids: Particularly, 'bad' water or unboiled water were named as cause. But also the eating of maize, mangoes, and other (sweet) fruits.

"Bad water." "What kind of bad water?" "Like bad wells. And when you get that water and you don't boil it." (mother)

"Depending on raw water, which is not boiled. There is also this, the porridge, which they make and then they dilute it with raw water." (old woman Mutooma)

"Maybe mango's around the month of September," "Just like that!" "When you eat the mango's around the month of September and March, that's when omushwizha also comes much. Now around that time, during the month of September, that's when it is time for mango's." (workers)

"Some think that it is during that time when there is maize, when their children eat the maize, they get omushwizha." (worker)

Regarding the eating of these fruits or the drinking of water, some qualifications were added: especially food or water from a 'strange' place would cause omushwizha. In that case the 'enjoka', or snake (which refers both to the intestine and to worms), would not yet have grown accustomed to this strange food, and would therefore revolt. This also explains why children run a greater risk of catching omushwizha by eating the fruits mentioned and maize. Their enjoka has not yet grown completely used to strange food. This also indicates why particularly fruit like mangoes or maize are mentioned as typical causes of omushwizha. These are available only in certain periods of the year, as opposed to for instance 'matooke' (plantains), which are available throughout the year. Thus, the enjoka has to 'grow used' to these foods each time, or alternatively it revolts, thereby causing omushwizha.

"I think it's also going to a certain place and then you drink the water from there and then you suffer omushwizha. (...) I think it's because you're not used to that water." (pregnant woman)

"Fruits like mango's, if you eat them, you also fall sick of omushwizha. Especially if you live here and you go to a place like Kihiji (in the Rift Valley, nearby Zaire) which you are not used to." (pregnant woman)

"Now you can leave a place like this one, then you go to Nyabushozi and when you reach there, you find there are some sugarcanes, or pawpaws, you eat them, and they bring omushwizha to you. But the foods which they cook in the sauce-pan, we don't believe that they bring omushwizha. Only the sugarcanes, pawpaws, mango's, we know if you eat them, they will bring you omushwizha." "Why do we think that those foods are the ones which can make us have omushwizha, when we take them from outside?" "We think it is because of not being used to them, because they are not the same, the soil is not the same." (...) "You see, the water which is in the

"soil, with us we think that the water of that place may not be the same as the water of this place." (young women Kantojo)

"And when you have relatives there and you go, visiting them and they prepare you the food from there and you drink the water from there and you from this way, you go and eat the food of that place and your enjoka doesn't agree with them, then later you feel you are getting caught, falling sick of that omushwizha." (old woman Kinyamahwa)

"Some think that during the time when there is maize, when their children eat the maize, they get omushwizha."

"During still the same maize season, as the maize starts to mature, when people begin to eat it, then it can cause also omushwizha."

"Why does it get us when we eat maize?"

"Me, I feel that such a foods after a time we take them, after about six months, now because you have been used to eating the dry foods, now these ones are just fresh and then when you begin to eat, your enjoka is not used to it, then it makes you fall sick. And as you take them and your enjoka is not used to them, then you start vomiting and having diarrhoea." (workers)

"It attacks the children when they eat maize. You find with them their enjoka can't really overcome, but when you are old, you enjoka can overcome it." (mother)

"There is one who may be eating badly and he eats the foods which maybe the enjoka doesn't want and then it results into sickness." (old woman Kinyamahwa)

"(It is because) we started boiling milk. The milk is medicine (...), the unboiled cow's milk, it has medicine in it, because it eats every herb. But when we boiled it (...), it also changed the enjoka." (traditional healer, Kahoko)

These causes of omushwizha seem to relate to a certain degree of *adaptation*. If one is adapted to food or drink, either because of adulthood or because of having grown accustomed to one's environment, one is less likely to be stricken with omushwizha. It is the enjoka, i.e. the snake, the intestine, or the worms within the body, which has to grow accustomed. If not, the enjoka will revolt and cause the symptoms of omushwizha.

Whether this concept of omushwizha is equivalent to the concept of malaria from the biomedical system is a moot point. Rather, it seems equivalent to biomedical gastro-enteritis, like for instance traveller's diarrhoea. The mango and maize seasons, however, coincide to a large extent with seasonal peaks of malaria: around August and December, the prevalence of malaria at the hospital is greatest, while a smaller peak occurs in February. For maize, as well as for mangoes, the main harvest season is in January/February, a lesser one in June/July. Both are linked up with the rainy seasons, which end in June and in January. It can then be explained from the biomedical system that at the end of these periods there are bound to be a lot of mosquitoes, which will also reside in maize fields, and which will cause a greater prevalence of malaria. Some of the respondents acknowledged this relation of maize and rain:

"And even the maize in the wet season, you find there a lot of mosquitoes." (mother)

"Now to add on to that omushwizha passing through the maize, when it rains, the water comes and settles within the maize plants. And then it causes the mosquitoes to get there and breed from there. Then that's what makes the omushwizha also pass through the maize. Then when you go to break your maize, then the mosquitoes arise from there, they bite you and you get omushwizha." (worker)

Ad (d) omushwizha caused by weather conditions: Not infrequently the elements, such as the sun, rain, and wind, were mentioned as causes of omushwizha, the latter usually in combination with dust. The influence of these elements is seasonally determined: in the dry season, omushwizha can be caused by exposure to the sun and the concomitant heat. Furthermore, the season brings a lot of wind and dust, which may also cause omushwizha. During the rainy season, on the other hand, the rain and the cold are held responsible for omushwizha. But also during the evening (in both the dry and rainy seasons) the cold may strike and lead to omushwizha. The rain, however, may also transmit heat, by releasing as it were the heat from the ground.

"Now with omushwizha, do we know what brings omushwizha?" "It comes during the time of sunshine." "But what makes you think that omushwizha is there during the time of sunshine?" (...) "Maybe because at that time there is a lot of heat and the body gets very hot." (mother)

"When the sunshine comes, the omushwizha multiplies." "Why?" "I don't know, I think it's because the earth is getting hot, then the hotness comes into the body." "With this sunshine, it doesn't help our lives, we stay all day working under the sun, that sun may clot your blood, (...) you lose too much strength." (young woman Nyakagyeme)

"Me, what I know is I think that maybe after having much sunshine and it shone so much, taking about two to three months, when it rains, then it brings that heat from deep in the ground and then it enters us. Maybe it passes through our legs, in our sleeping, in our drinking, or in the food we eat, it must pass through that and the omushwizha passes through it also." (old woman Kinyamahwa)

The **heat** of the sunshine is thus turned as it were onto the body, in which it then causes the symptoms of illness. Also other kinds of heat were put forward:

"At times in the house, when you are there, so many people in the house, or there is much heat in that house, that much heat then results in omushwizha." (pregnant woman)

"It comes out of the heat. From that heat of the person who has it, it makes you also have it." (young woman Nyakagyeme)

"A few days back they were saying that this omushwizha is brought by the heat from the guns in Rwanda, when there is war and fighting, then the hot air which comes from the guns." (pregnant woman)

Besides heat, cold may also cause omushwizha:

"They say that it is brought by the cold and in the house which has no ventilation, or the house which has a lot of heat." (pregnant woman)

"Now with us in the village, children sleep under one blanket. Then one keeps shouting: 'You are uncovering me, you are uncovering me!' Then in the morning you will find that child is caught by omushwizha (because of coldness)." (worker)

"At what time of the day is one mostly exposed?" "During the evening." "Why then?" "Because it is cold in the evenings." (mother)

"When you go to very cold places in the morning, you also get omushwizha." (worker)

"The rain can fall on you, then you get omushwizha." (worker)

"They say when it rains on you, especially in the rainy season, when they are weeding, then it makes also you get omushwizha, they say that the body gets weakened, when you have been just there that warmth you had gets off, so you get cold and weak and in the end you get down with omushwizha." (young woman Kantojo)

"With us, we think when that rain beats you, especially that one of November, it can fall on you around 10 a.m., then there comes a little sunshine, then the coldness sort of leaves your life. Then around 2 p.m. another one falls. You know we who have planted millet, we don't go home early. So another one falls and beats you. And that little sunshine which had shone it will have gone out of your life. So when you go home, you'll go when the body has crippled, then when you reach home, you continue with the coldness, you reach your bed and sleep, because of that rain which has fallen on you twice, then you continue in the bed, starting bad life, that one also we call it omushwizha." (young woman Kantojo)

"You keep stepping in the water and the mud, and the rain becomes so much, it beats you when you are in the gardens (...), you get cold, it results into shivering (...), then the cold enters into the body, then you get weak." (old woman Mutooma)

So both heat and cold were specified as causing omushwizha, sometimes even by the same respondent. These then turn onto the body, after which the body experiences sensations of heat and cold itself. One of the respondents made a clear distinction between the ways in which the body reacts to heat and cold:

"It is not the same: in the cold season the cold causes you to shiver greatly, although the body is very hot. In the dry season it keeps on flowing in the blood, because the blood is warm. But with coldness: the blood is clotting (...), you can get omushwizha because your blood is cold and so it is not moving, from cold water you'll just get it." (old man Mutooma)

Although this man alleges cold to cause the blood to clot, it was proposed earlier that it is in fact the heat which causes the clotting of the blood. In any case, it is clear that people associate omushwizha with the condition of the blood. Some people stated that the bloodstream toward the head was likely to cause headache.

Although a relation between malaria and blood is also recognized within the biomedical system (which, according to some researchers, consists in the malaria parasite's ability to clot the blood cells in the cerebellum's vessels, thus causing the dreaded cerebral malaria), the underlying explanations of malaria are unknown. Within this system, heat and cold can really only be comprehended as causative agents of respectively sunstroke (which may engender headache and nausea)¹⁴, and of the classic 'catching a cold', preceding a fit of influenza, although within the biomedical system also a virus is noted as malefactor.

However, for malaria, as defined within the biomedical system, to spread, the mosquito is still required for the transmission of the malaria parasite. The mosquito thrives in the course of the rainy season into the beginning of the dry period, when there are many puddles and pools with stagnant water. In some cases the relation rain —> mosquito was recognized by the

¹⁴ During the dry season, I experienced some trouble with sunshine myself, when not infrequently, after having spent many hours outdoors, I suffered from a severe headache in the evening. Moreover, the nights were very cold, as were the days during the rainy season.

respondents, although sometimes they referred to the cold of the rainy season, rather than the rain itself.

"Me I think that at times when the rain becomes much, then the mosquitoes become many. I think that's what brings the problem, the mosquitoes." (old woman Kinyamahwa)

"Me I think during the time when there is much rains, that is when there is much omushwizha. Because the mosquitoes are producing a lot. When the mosquitoes are many and they bite you, you must fall sick of omushwizha." (pregnant woman)

"They (mosquitoes) like cold places. Because during the sunshine you may not see them. But when it is cold you may see very many of them." (mother)

"Now, to add on to that, why omushwizha is much during the dry season, I heard a health man saying that that's when the water is lodging in one place and then the mosquitoes get where to breed from. During the wet season, why it doesn't become much, the water doesn't stay in one place. When it tries to settle in one place, and then more rain comes, then it sweeps it away. And if the mosquitoes have laid their eggs in that water, then those eggs will die. So that's why omushwizha is much during the dry season and when you pour water and it lodges there, it settles and nothing to drive it away. Then the mosquito comes and lays its eggs there and the eggs grow. That's why you see sometimes even the frogs will also produce during that dry season, because they know the water doesn't move." (worker)

Omushwizha and the seasons are clearly connected within the traditional system, and this connection is also found within the biomedical system. Within the latter system, however, the mosquito is seen as intermediary agent; it is not the elements themselves which cause malaria. Within the two systems perceptions exist, both separately and in combination, i.e. biomedical explanations are added to traditional ones. This leaves open, however, the question whether omushwizha, caused by sunshine or cold, is equivalent to malaria.

Besides a relation between omushwizha and the weather regarding the seasons, a connection with *location* was also observed. At colder locations, such as the high Kabale, omushwizha was said to be virtually absent; at warmer places, like the Rift Valley or Buganda, omushwizha prevailed. Sometimes the respondents did not specify the difference in weather conditions of these places, but simply stated that these places were 'different', and that it might as well be the different food which causes omushwizha.

"Whether the omushwizha will be waiting for you, I don't know. Because with me, when I step there (in the place where she was born) after it has rained, I become sick of omushwizha. But when it is during dry season, I come back well." (young woman Nyakagyeme)

"I think it is the heat. The warmth of that place is not similar to the one of here. And I think that's what brings omushwizha when you go to such a place." (old woman Kinyamahwa)

"Others tell us that in a cold place there is no omushwizha. And in places where there is a lot of heat, that's where there is omushwizha. Places where there is cold, like Kabale, there is no omushwizha." "Places like these ones of ours which are warmer, there you find there is a lot of omushwizha." (workers)

When people asked me if there was any omushwizha about in my own country and I had to deny, they tended to explain this in terms of the difference in climate: in a cold country such as the Netherlands there could be no omushwizha. The connection concurs with biomedical

theory: from 2000 metres above sea level and upwards, the malaria mosquito cannot really transmit the disease, since it is virtually absent there. The area of research is located not far below this boundary, which may suggest that there malaria occurs less frequently than in the lower areas of the country. In that respect, it is also easier to understand that one runs a greater risk of catching malaria when visiting one of these lower areas.

It was remarkable that within the local perceptions people came up with the same (warmer) areas whenever food from these areas was mentioned as causing omushwizha. It seems that when people do not recognize the mosquito as causative agent, they tend to mark the local food as disease-carrier. Both food and weather conditions are designated separately as responsible for omushwizha. If they are from elsewhere, however, these causative agents are considered as more malign.

Some of the respondents indicated that climatic changes in the area of research were responsible for the present omushwizha in this area. Apparently, in the old days the weather was different, and not as hot as these days. This climatic change has brought more heat, and hence more omushwizha. The change of weather was also mentioned in a different way as cause of the increase in omushwizha. The haze which hangs in the valleys these days, particularly in the morning or after rainfall, was said to cause omushwizha by inhalation.

"And the world has changed so much. You see, even the seasons have changed. And even the cultivators are confused about the time of sowing their seeds. The month which used to be for the rain, now it is for sunshine. And the one which was for sunshine, is for rain. And the sunshine goes on (...)."

"So we think that the change in the world, is the one which brought us this sickness."

"After 1991 there has been much more sunshine. The sunshine causes a lot of heat and damp, so the damp comes up and then it falls down on the people (...)."

"How does this mist cause omushwizha?"

"This mist, we have to inhale it, then it goes to the stomach, then it brings the sickness in the body. It brings the heat or the cold in one's life." (old men Nyakagyeme)

Conversations and literature, indeed, indicate that formerly no malaria was found in the area of research, after a malaria eradication programme was effected using insecticides from 1959 to 1961 (de Zulueta, 1961 and 1964). But even before, in the history of the district, it was known as a favourite area for emigration, for the absence of malaria (Denoon, 1972).

Heat and cold were indicated in various ways as cause of omushwizha. Some of these agree with the way in which the development of malaria is explained within the biomedical system. This concerns the relation with the rainy season and stagnant water, as well as the connection with high, cold places, where malaria is hardly found, for the absence of the required malaria mosquito. Others, however, such as the transmission of the heat of the sun onto the body, or catching of cold, are not related to malaria in the biomedical system. These can be seen, on the other hand, as causative agents of other diseases' symptoms (like sunstroke or influenza). Within a naturalistic medical system, however, they can be comprehended: the elements cause illness in the body, by upsetting a certain balance (the body, or the blood, is altered: hotter or colder).

Ad (e) personalistic explanations

Few other explanations for the development of omushwizha were found. One older man indicated as cause of the climatic change (which would in turn cause omushwizha) the burning of the old gods. If they could be brought back to life, it would be possible to effect a change of weather by sacrifices, which would then result in a change of the omushwizha situation. Some people thought that omushwizha was introduced by the white man.

These so-called personalistic causes are not known within the biomedical system, but within local perceptions they are hardly seen as cause either, at least not for omushwizha. However, it is deemed possible for people who suffer from omushwizha to die by a bewitchment.

Ad (f) predispositions

Finally, a number of predispositions or 'reinforcers'¹⁵ for the development of omushwizha were mentioned. These are exertion, limited strength, limited amount of blood, and weak bones. Too little food or food of bad quality would be at the root of a decrease in strength, while some people may be born as 'weaklings' and would thus be more susceptible to omushwizha. Exertion was named as reinforcer particularly by women. The symptoms would aggravate by continually having to work (the land). Although the women work hard all through the year, the amount of agricultural work increases toward the end of the rainy season and the beginning of the dry season. This is the harvest time for maize, beans, and peanuts. The harvest is followed directly by plowing, for the sowing of millet. These months coincide with malaria peaks, and the chances of being stung by mosquitoes which reside in the (maize) plantations are increased. Pregnancy was not mentioned extempore as risk factor. When presented with the issue, people were able to explain it: the pregnant woman has to share her blood with the embryo. There was no general consensus on the question of **high-risk groups**. Young women deemed themselves a high-risk group, since they have to exert themselves a lot, while men on the other hand also considered themselves a high-risk group, since they travel a lot and therefore run a greater risk of catching omushwizha in a foreign place. Sometimes older people were considered as more susceptible, sometimes the younger generation. Mostly, however, it was concluded that no particular (high-risk) group was particularly predisposed for omushwizha:

"What kind of people mostly get the omushwizha, because we see we have the younger ones, we have the middle age and also the aged people, so who of those commonly fall victims of omushwizha?"

"It doesn't segregate."

"It doesn't choose."

"I see it trouble almost everyone, a woman, a child, an old woman, all are disturbed by it, we all fall sick of it."
(old women Mutooma)

Also, an incident from the past was sometimes given as causing the recurrent omushwizha. A sick man blamed for his recurrent suffering of omushwizha the fact that as a child he had to

¹⁵ The term of reinforcer is used to indicate those factors which reinforce the symptoms, or those which render the patient more susceptible to catching the disease.

sleep on the floor; he stated that in this way he had become more susceptible to colds, and hence to omushwizha.

To conclude: If we compare the concepts of omushwizha within the local perceptions and malaria within the biomedical perception in the light of their causes, we see that omushwizha is a much broader concept. While malaria on the one hand has only one cause, namely the malaria parasite which is transmitted by the mosquito, for omushwizha on the other hand many causes are indicated. The mosquito is seen as only one of many possible causes of illness. In addition, omushwizha may be caused by other insects, heat and cold, and certain food or drink. Also, it was indicated that sometimes the cause is unknown, or influenced by gods or humans.

Although several types were distinguished within the symptomatology of omushwizha, they could not be directly related to the various causes. All causes result in the same kind of omushwizha, however broad the concept. If one examines, however, the working of the various causes within the body, one finds a subdivision: the elements or weather conditions largely affect the blood, while food may facilitate omushwizha via the revolting 'enjoka'.

Within the already mentioned causes another subdivision can be observed, namely 'here' and 'elsewhere': food, mosquitoes or the weather may cause omushwizha from the place of residence, but much more so when from elsewhere. A certain sense of assimilation to the place of residence is required for decreased susceptibility to the causes mentioned. To be precise, it is the 'enjoka' (snake, worms, or intestine) which needs to adapt itself to the environment. This applies particularly to children, whose enjokas still need to adapt themselves to the children's own environment.

This adaptation can also be explained, if differently, within the biomedical system. Adults build up a certain 'semi'-immunity to malaria in the course of their lives, after an extended period of exposure to the disease. Therefore, adults suffer less, and if they do, less severly, from malaria. With regard to the area of research, malaria was less prevalent there than in many other, lower situated places where the malaria mosquito thrives and where chances of infection are higher.

A number of reinforcers are described in the literature which render a person more susceptible to catching the disease: exertion, weakness of the body, the bones or the blood, or a previous period of illness may render a person more susceptible. Within the biomedical system it is also known that people with a weakened resistance run a greater risk of catching malaria, which is why particularly pregnant women become infected more easily. High-risk groups which are indicated within the biomedical system, i.e. pregnant women and young children, are not recognized as such in the local perceptions.

A striking feature of all the discussed causes of omushwizha is their seasonal occurrence. At the end of the rainy seasons malaria increases because of the increased amount of stagnant water, which means an increase in the number of mosquitoes, and this is also the biomedical explanation for increased incidence of malaria in these periods. The other explanations, however, do not agree with those from the biomedical system: more maize and mangoes at the end of the rainy season, the heat of the sun in the dry season, or on the other hand the cold and the rain in the rainy season. The food products are of course harvested in the period of highest occurrence of malaria.

Many of the mentioned causes would be regarded within the biomedical system as causes of other diseases than malaria. For instance a poor quality of water or food may cause

gastrointestinal dysfunctioning or typhoid, sunshine may cause a sunstroke, and rain and cold may cause influenza. The symptoms of these diseases may partly overlap those of malaria.

Most of the causes, however, are comprehensible within the naturalistic medical system: weather conditions or food influence the (balance in the) body from the outside, alter its state, and thus cause illness. Furthermore, some personalistic characteristics were noted: gods and white people who willingly cause illness.

Observing the much greater diversity in causes of omushwizha in comparison with those of malaria, it becomes clear that these concepts are far from being synonymous. If the concepts seem more or less equal in terms of their symptoms, it appears that in terms of causes, malaria can be seen as being only one of the various kinds of omushwizha. The difference will have a number of implications for both the treatment and the prevention of the disease. The treatment of malaria will cure only a part of the omushwizha complex, while a successful prevention will also cover only part of the disease. This is one of the things which will have to be considered in the planning of a malaria prevention policy.

Below, an overview will be given in which local perceptions are measured against the biomedical perception of malaria, divided into local causes of omushwizha. When applicable, the seasonal component is also indicated.

Table 5.4.: Causes of omushwizha (with matching seasons), as seen within local perceptions and the biomedical perception.

causes	local perceptions	biomedical perception	season
mosquito	omushwizha	malaria	end of rainy season
other insects	omushwizha	no malaria	—
poor quality of water	omushwizha	gastrointestinal dysfunctioning, typhoid no malaria	—
mangoes, maize			end of rainy season
heat	omushwizha	sunstroke	dry season
cold	omushwizha	influenza	dry and rainy season
rain	omushwizha		rainy season
reinforcers: exertion	omushwizha	weakened resistance	end of rainy season

5.6. The treatment of omushwizha

The treatment of omushwizha can be divided roughly into two categories: on the one hand, there is the traditional treatment with the use of herbs, while on the other hand there is the treatment with western anti-malaria cures in the form of tablets or injections. Both methods are used, with a preference for the herbal treatment over the 'western' treatment. Western medicines are not infrequently also directly used.

"Because the hospitals are far away, or at times there is no money, I first use the native herbs, then I get the omubilisi and pound it and I look for other herbs and mix them together, those which I know can work on it, before I'll go to the hospital. When the omushwizha continues, that's when I go to the hospital." (old woman Mutooma)

"You pound them, you cook other herbs and you bathe them, until the morning when they will give you the tablets." (young woman Nyakagyeme)

'Omubilisi' is the herb which is most regularly applied in the treatment of omushwizha. It is a common green plant of which the leaves or roots are ground and boiled in water until a bitter, green liquid is created. The patient needs to drink this liquid. The patient may also bathe in this diluted substance, or use the hot omubilisi-extract for a steam bath. According to the respondents omubilisi brings about vomiting or diarrhoea. The thing which bothers the patient, something that blocks the throat or stomach, is eliminated in this way, thus causing the patient to feel relieved. Some people called it '**breaking the bile**' through omubilisi. This ball of bile in the throat or stomach is caused by omushwizha, and can only be overpowered by other bitter substances.

"That is when you are feeling real bitter inside (points at chest) and when you take it [omubilisi], then you vomit. And when you vomit those things which you feel that are bitter (points at chest) then you feel you are eased." (mother)

"When you'd get omushwizha, when you'd get to know it and you vomit that bile, which is bitter, it would force you to take bitter things which probably would be assumed to overpower it." (old man Mutooma)

Other respondents, however, indicated that omubilisi **takes away the heat** from the body either through vomit or diarrhoea. Diarrhoea was considered as a good sign anyway, whether effected by omubilisi or not, which would ensure a quick recovery.

"Now others say that when you are suffering from omushwizha and then you also have diarrhoea, they say that that heat can also pass out through diarrhoea and you get well." (pregnant woman)

"It [omushwizha] can get you and it causes your stomach not to give out, and all get stuck. It dries you. (...) So when you start having diarrhoea, it makes things easy, seeing that things in the stomach are beginning to go out, slowly, slowly, even when you get the medicines it will help you. But if there is a mistake and all in the stomach get stuck, then you know that you are in a critical condition." (old man Kahoko)

Although omubilisi was generally known as a medicine for omushwizha, people differed in opinion with regard to its effects. Some people stated that omubilisi offers only relief from pain,

but no real treatment, while others said that it only works on elderly people, or on patients with merely a mild attack of omushwizha.

"Now this one has said that if one pounds the omubilisi, can't she drink it and get cured?" "You can only get some relief, but you can't get cured, back to normal condition." (pregnant woman)

"Those of long ago are the ones who were cured by the omubilisi, but today's omushwizha can't be treated by omubilisi without going to the clinic." (...) "But me, I think you are opposing the use of omubilisi for nothing. If you get the omushwizha before it overpowers you, especially those who have matured, you can take it and you will get better. Except with children, because they still have weak bones, but as for those who are mature, when they take, they use it before the omushwizha multiplies. They have strong bones (...) if you have blood and you are strong and you take the omubilisi, you have to be well." (pregnant women)

Besides omubilisi other herbs, suitable for the treatment of omushwizha, were mentioned, among which 'omutondigwa', 'ekishekashkye' and 'ekibombo' (see appendix 5). These are very common and easy to find. Most of them taste very bitter, and some people believed that malaria tablets such as chloroquine, which also taste bitter, are fabricated on the basis of these herbs. Moreover, some herbs are used to alleviate headache by rubbing them over the temples. Besides herbs, the washing with cold water is also used to lower the fever.

The second category of remedies for the treatment of omushwizha concerns the western medicines. Particularly chloroquine and aspirin were mentioned as medicines which are available both from the clinic as well as the local shops. They are used in the first and second instance. If these medicines fail, the patient is transferred to a clinic or hospital, at least when he or she can afford it. According to the respondents these tablets not infrequently miss their effect.

"We commonly use the tablets, which we buy from the shops. When it intensifies, then I go to the hospital." (mother)

"It's the same with these tablets which we buy from the village, you also take them and you seem to improve and then the following day you continue to be sick." (pregnant woman)

"When it [omushwizha] gets you, you go to the clinic, then they give you some chloroquine. Then when you swallow them, then you move on that until you go to the hospital." (worker)

When asked whether these medicines work the same way as omubilisi, people responded negatively: omubilisi works on the bile, or causes vomiting and diarrhoea, facilitating the removal of heat from the body. The tablets, on the other hand, effect the blood, or cause the heat to leave the body through sweating.

"Is there a way you know it [tablets or injections] works?" "Yes, you can sweat, when you sweat that heat goes out. Then you get well. (...) when it reaches the blood and you feel better, then you know it has worked." (pregnant woman)

Many people, however, indicated that they did not know the precise workings of the medicines.

Remarkably, herbs which effect vomiting or diarrhoea are also used for traditional diseases, like for instance 'engundu'. More specifically, however, we need to go into the question of whether

the 'omushwizha herbs' are also regarded as a cure for other diseases. A general assessment will be made as to how (traditional) diseases which are similar to malaria in terms of symptoms are treated. The matter will be discussed in chapter 6, section 4.2.

The group discussions did not reveal which dosages people used for chloroquine and aspirin. The information is relevant, since too low a dosage might account for the already mentioned ineffectiveness. Furthermore, low dosages may generate chloroquine resistance of the malaria mosquito, which possibly explains the persistence of malaria symptoms after treatment. Yet another explanation may be the fact that malaria tablets are used for a different kind of omushwizha.

During the next stage of the research an attempt at clarification was made by means of specific questions and observations of the treatment of omushwizha patients (see section 6.3.). Clinics nearby were also visited in order to get an idea of the various facilities for treatment (section 6.4.1.).

It would have been interesting to investigate the biomedical workings of omubilisi and other herbs.¹⁶ Unfortunately, this was not possible within the limits of this research. It seems obvious, however, that the herbs are not poisonous, because otherwise the community would have found out earlier, and would not be using them. Recommendations concerning these traditional treatments can only be based on assumptions.

At this point, the conclusion must be that roughly two ways of treating the symptoms of omushwizha exist: on the one hand we find the traditional herbs, of which omubilisi is the main representative, and on the other hand there are the biomedical tablets of chloroquine and aspirin. Both are reported to fail sometimes. The last resort is Nyakibale Hospital, where the patients will be examined and biomedically treated.

5.7. The prevention of omushwizha

When asked about the possibilities of preventing omushwizha, a variety of answers was given, which can be divided more or less into three categories:

(1) Firstly, some people indicated that **prevention is useless**; omushwizha would strike anyway, whatever measures taken.

"Is there anything else we can do on precautions?" "But when you get a sickness and it kills you, what can you do about it?" (mother)

"Well, with the sicknesses, I think we shall get falling sick. Whatever God does to us, that's what we shall be, we have nothing we can do." (mother)

"For us, to prevent ourselves from omushwizha, we would be doing it [prevention] but when it comes, it will get you anyway. So you can't prevent yourself from it, when it comes, it will get you." (worker)

¹⁶ A number of talks with physicians and health care planners on the subject revealed that these herbs are not dangerous in any case and that some of them even appear to contain an effective substance.

Even when people were able to indicate a cause of omushwizha, they still tended to regard it as inevitable. This applied to both the biomedical cause and the traditional causes.

"One way we've seen it's brought up by maize, but then shall we stop planting maize? We've seen it might be in the banana plantations, but shall we stop the banana plantations?" (mother)

"In the time of maize there is famine, so there is no way we can leave it." (mother)

"When you boil water and you come from digging and your water is in your bottle, you are very thirsty, then you just drink it, even if it is unboiled." (worker)

"We can use the boiled water, but for mosquitoes what can we do?" (mother)

"And that mosquito you can't have a way of dodging it. Even when you put on a long coat, even a hat, it will bite you on the eyes." (old man Nyakagyeme)

"If one is able and can afford to buy the nets, the mosquito-nets, then he covers the whole bed. (...) But then we see the mosquitoes are there, all the time." (worker)

These conversations were characterized by a sense of resignation. Most of these people had put their fate in the hands of God. They often asked for education on this subject.

(2) A second category of possibilities for prevention are those which try to prevent or overcome the **non-biomedical** local causes of omushwizha. A number of possibilities was noted: boiling the drinking-water and limiting the number of children sleeping in one bedroom, in order to prevent contagion and to keep out the rain and cold.

"To prevent ourselves from it, we can use cleanliness." (mother)

"But also, how we can prevent, that is to boil the drinking water." (young woman, Kantojo)

"The way to protect yourself is hard, but maybe to prevent yourself a bit (...) when it rains or it becomes cold, you get something to cover yourself with (...) and to make the children sleep, see that in the room there is a reasonable number of people, you make sure that at least there are two people in one room and another two in another, not just dumping four children in one room and then one breathes the breath of the other." (pregnant woman)

"Having a good house, you have to sweep and also to wash and to bathe and to eat good food and then boil water and put it in a pot, so that when you are going to take water, you take that boiled water. And when you are to bathe, you bathe in warm water. You have to cover things [food] and also cleaning the compound. With the house you sweep it." (pregnant woman)

(3) Finally, the **biomedical** ways of prevention were also often mentioned. The measures were then aimed at bringing down the number of mosquitoes and at destroying their habitat, such as stagnant water, bushes and rubbish dumps.

"I think if we would eliminate those places that trap bad water and then the bushes around, that would reduce the mosquitoes, because thy tell us that it is the mosquitoes that are the ones that bring omushwizha." (worker)

"To protect ourselves from mosquitoes is to cut the surrounding bush, then we see they also multiply where there is water. As one said, the water which always collects in one place. So we don't allow it to collect in one place." (worker)

"You clear the place so that the mosquitoes don't keep near; they have to weed them, so that they extend [from the house] and also the compost pit to be extended from the house." (pregnant woman)

These measures are the only ones which concur with known biomedical methods of malaria prevention. However, a number of possibilities for the prevention of malaria was either completely ignored, or immediately qualified as not applicable. These include: mosquito nets, insecticides (both of these being too expensive), malaria profylactics (it was not believed that the tablets would work in case of illness, if they had been taken before), wearing ample clothing at night, or the burning of coils or other things, like peelings or leaves (the smoke chasing away the mosquitoes).

"But we people from the village, we can't really do as we are told, to buy mosquito nets, because we don't have money to buy it and yet it would be one of the points to prevent ourselves from omushwizha." (worker)

"You have to look for some medicine [insecticides], when it's getting evening, you spray." "But can it be affordable? Even for the following day.." (mothers)

Sometimes people came up with possibilities for *treatment* instead, when asked about ways of preventing omushwizha.

"There is no way you can prevent yourself from omushwizha or any other sickness. Only when you get caught, the best thing is to go to the hospital." (young woman, Nyakagyeme)

"So even that one [omushwizha] we cannot prevent?"

"If you have medicine you have to be cured."

"No, but I mean prevent.."

"You cannot prevent it. Apart from taking tabs, you cannot prevent it." (ill mother, Kahoko)

"Another thing I see, if you see that you are frequently caught by omushwizha, you should be using the medicines, so that immediately after you are caught, you quickly use the medicines, (...) before it overpowers you." (young woman Kantojo)

Generally speaking, very often people came up with hygienic measures for the prevention of omushwizha. Almost all of them could reel off the list of hygienic measures, even if they did not mention the causes which lie at the root of it (such as dirt or dirty water). Later on I learned from the Community Health Nurse that the health care education particularly focuses on hygiene. It appears that, even if the causes are unknown, people still suggest these taught methods as possibilities for prevention.

It was also the case the other way around. Frequently sunshine or the eating of certain food were named as causes. However, avoiding exposure to sunshine or avoiding food from certain places were hardly at all mentioned as possibilities for the prevention of omushwizha.

The connection between cause and prevention then was not always made. Suspicions even arose that the fact that unboiled water was so often mentioned as cause of omushwizha was inspired by educational insistence on the boiling of drinking-water. For the traditional causes,

very rarely were measures for prevention indicated, while people did come up with measures for the prevention of biomedical causes. The non-biomedical causes (like unboiled water or excrement) for which a possibility for prevention was named are known to cause other (biomedical) diseases. These possibilities for prevention were all taught. Thus, the question arises whether the idea of prevention belongs within the mental framework of local diseases, or whether it is purely a biomedical concept. Within the biomedical framework it follows that if the cause of a disease is known, the effort will have to be made of eliminating this cause. Within the traditional framework, however, this way of cause-and-effect reasoning appears to be less obvious.

This would also concur with the difference between malaria as cause and omushwizha as symptom, which will be discussed below in section 5.8.. A cause may be prevented, but a symptom can merely be treated.

This crucial difference will have to be borne in mind when a malaria prevention policy is initiated. Before people attempt to (learn to) prevent the disease, they will have to be aware of this cause-and-effect reasoning.

Also, a clear need was found among the local population for education concerning the prevention of malaria, either because people did not know the possibilities for prevention, or in case they did, they experienced some failure of these possibilities due to various circumstances.

In addition, in the initiation of a malaria prevention policy early treatment with chloroquine or other anti-malaria cures as a means of secondary prevention would have to be taken into account. The reason for this is that apparently people seemed to have more confidence in the effects of treatment than in the effects of prevention. Moreover, this form of prevention is also feasible from a biomedical point of view.

5.8. Symptom versus cause

At this point, the differences between omushwizha and malaria in terms of the four main themes of symptoms, causes, treatment, and prevention having been discussed, the question arises whether these differences may in fact all be reduced to one underlying (more abstract) difference which would explain the mentioned differences. The basic difference may consist, in my opinion, in the dichotomy of **symptom** (omushwizha) versus **cause** (malaria). In other words, omushwizha as expression of a disease, and malaria as cause. The difference emerges for instance in the typology of both concepts. The different types of omushwizha are invariably classified on the basis of subsidiary *symptoms*, whereas the typology of malaria is founded on the difference between malaria parasites as *causes* (*Plasmodium falciparum*, *vivax*, *ovale*, and *malariae*).

In the discussion of the difference in causes the same idea emerges: malaria has only one cause (the parasite) and one causative agent (the *Anopheles* mosquito), while for omushwizha many different causes are indicated (heat, food, insects, dirty water) which all effect one and the same expression — omushwizha.

Although various anti-malaria cures are available for the treatment of malaria, all of them aim to exterminate the parasites in the body. Local treatment on the other hand aims for

counteracting the symptoms: omubilisi to banish the bitter taste, aspirin and herbal massage to alleviate headache. Apparently, chloroquine is also used in this way: as soon as the symptoms have vanished, the treatment is discontinued, even if the cause, the parasite, may still be present in the body.

The idea of prevention, i.e. preventing the disease by eliminating its cause, appears to be less plain within this sort of 'symptomatic reasoning'. The assumption seems to be that a symptom simply occurs, and then what else remains to be done about it than treating it?

The same difference evolves if one considers other diseases: pneumonia (cause) is termed as 'a mild pricking sensation in the chest' or 'a tight feeling in the chest', AIDS (which refers to the causative virus) as SLIM, i.e. becoming slimmer, and meningitis (inflammation of the cerebral membrane) as 'omuraramu', i.e. looking upward.

However, it appears that a strict division between malaria and omushwizha in terms of the difference between symptom and cause cannot be sustained. In the case of omushwizha more symptoms are given, while sometimes some causes are also indicated, whether they can be prevented or not. Maybe the latter is effected by the enduring biomedical influence on local perceptions. One of the hospital's physicians claimed that the fact that in the case of omushwizha a variety of symptoms is indicated, can be explained by assuming that in most cases omushwizha refers to malaria, since omushwizha is the most common cause of fever in the area. He did recognize the difference, though, between omushwizha and malaria, just as the other members of the management team did.

Omushwizha will have to be recognized as a disease with several symptoms, but which in the end refers to a symptom or expression of illness. Likewise, malaria can be seen as a disease which effects several symptoms, but which in the end refers to a cause.

Diagrammatically, the difference between malaria and omushwizha can be represented in this way:

Diagram 5.1.: the difference between malaria as cause and omushwizha as symptom(s).

In the literature, this division between cause and symptom is not actually put forth to distinguish lay perspectives from (bio)medical perspectives, nor is it marked as a discriminating factor to differentiate the biomedical system from naturalistic or personalistic medical systems. Some reference to the distinction is given, however: within the (bio)medical perspective it is the physician's job to find out the cause of clinical 'facts'. Every 'fact' has its cause, and even if it cannot be found, the nomenclature will still refer to it (for instance loss of blood 'e cause ignota', or idiopathic anaemia) (Helman, 1984). The 'lay person' on the other hand will try to find out on the basis of his lay model why a certain symptom causes his illness and pathological behaviour (Schepers and Nievaard, 1990). The materials of the distinction are indeed found: the physician values the cause of illness, whereas the 'lay person' is rather more concerned with a particular symptom.

5.9. The culture

The perceptions of malaria, or rather omushwizha, can in various ways be seen as expressions of the existing culture.

Firstly, there is the preoccupation with food and 'Mother earth'. The community's life evolves around surviving and providing food on a daily basis. Particularly for the women this is a continual concern. The land is cultivated for food, firewood is gathered for cooking, and little baskets are plaited to eat from. On special occasions, such as a wedding or a guest visiting, hospitality is shown by means of an extended or more copious dish (for example with meat). Whenever children come home for the weekend or because of (school) holidays, they are immediately employed on the land. Spare time does not seem to exist, for there is always some weeding or ploughing to be done.

People are greatly dependent on the seasons: a prolonged period of drought may endanger the harvest, which in turn may engender famine, a serious threat to life. The seasons determine the availability of food, and because of that directly or indirectly the occurrence of omushwizha.

Besides food, the land is cultivated to produce a number of other things as well; wood for the construction of houses, and other plants for the manufacture of roofs, baskets, mats, brooms, face cloths and toilet paper. Plants are also used for fighting diseases with. Many of them taste too bitter for the use of food¹⁷, but they are not poisonous, as far as is known.

This way of life, so much in harmony with mother earth, appears to be very concerned with maintaining the 'status quo'. Although these communities are changing under the influence of education, a significant social pressure not to stand out from the others remains. Girls who have had 'too much' education stand less of a chance of marriage, and it is considered a shame to be 'left over' or to remain childless. Families which appear to be rich try to hide their prosperity in all sorts of ways. People are reluctant to tell how many cows they possess, or how many children they have, to avoid the envy of other people. Envy may cause revenge by means of 'witchcraft'. A person who gets bewitched may die as a consequence, unless timely action is

¹⁷ The studies of Etkin (1979 and 1983), however, show that the people of the Hausa tribe of Nigeria do indeed use these herbs for food, and as a consequence suffer less from malaria.

taken. Omushwizha is not in itself caused by witchcraft, but witchcraft may aggravate the disease up to the point of death.

The idea of remaining in the place of residence is also advanced by a set of 'social control on illness'-rules: if one leaves for some other place, one runs a risk of being stricken with omushwizha, either by a change of food or change of weather.

A certain acceptance, which I earlier termed as resignation, is also striking: life is a matter of taking things as they come, and this includes illness and death. Since little can be done about the weather, it follows that a disease which so often is caused by the weather (or by food or insects) is considered to be little more than a fact of life as well. Illness simply strikes, just like any other accident, and can only be dealt with once it is there. Planning or thinking ahead are not part of local thought, and preventive action is therefore largely instigated by education.

The solution is found in trying to establish a balance, both outside the body (the pursuit of harmony with nature and with the community) and within: the heat must leave the body through vomiting, diarrhoea or sweating. Bile is evicted with the use of bitter herbs or medicine, in order for the body to re-establish its balance. Sometimes, man is literally compared with plants, which also need to maintain the balance with their environment, in order to survive:

"You see, we people, we are also like plants. The plant needs warmth and it needs also rain. It needs moderate sunshine and rain also. So, when one of them lacks, and there comes any sickness, it can increase and clears us all. That's how I think, I'm not a scientist" (old man Nyakagyeme).

This kind of acceptance, however, is not total: clearly, the influence can be seen of biomedical science, which teaches people that many diseases can be fought successfully and can be prevented.

A mixture of personalistic, naturalistic and biomedical systems make up the framework from which perceptions of malaria can be comprehended, a framework which is embedded in the underlying culture: personalistic elements can be observed in the desire for maintaining the 'status quo' and find expression in the fact that one may be bewitched by a person or demon, with the possible result of illness and death. Naturalistic elements concern the dependence on nature and the necessity of living in harmony with nature. If this necessity is disregarded, the elements such as the weather may cause illness in the body. The biomedical influence, finally, can be seen in the fact that people are willing to take preventive measures concerning malaria, which aim at eliminating its cause.

6.1. Introduction

After having discussed in the previous chapter the disease of malaria, or rather omushwizha, I would now like to focus on the people that suffer from this disease. It will be discussed how patients cope with their illness, what kind of treatment they opt for, and what kind of treatment the healers have to offer. Thus, supplementary information regarding the first four main questions of the research will be given. The fifth main question (what is the relationship between malaria and other diseases?), however, will be dealt with more extensively.

The information is drawn mostly from the second stage field work, in which observations and interviews alternated and complemented each other. Interviews were held with both patients and healers, the latter from the 'traditional' circuit as well as from the biomedical field. In addition, health care educators were also interviewed, which included the Community Health Nurse from the hospital, as well as members of the Community Based Health Care team; villagers which occupy themselves on a local basis with the prevention of diseases, among who malaria.

At this point, the stress markedly shifts from *perception* to *behaviour*: now that we have seen what kind of perceptions determine the concept of malaria, attention will be paid as to whether and how people behave in accordance with these perceptions of malaria when having to deal with the disease on a daily basis. This chapter will yield a second shift: if within the local perceptions many non-biomedical elements are retained, when it comes to treatment and prevention of the disease people are strongly inclined toward the biomedical system. How to unite these concepts will be discussed in the final section of this chapter.

First will be discussed: the process of interviewing and observing (6.2.), the omushwizha patient (6.3.), and the healers (6.4.).

6.2. The process of interviewing

During the week of July 3 to 10, 1993, I revisited Kahoko for a period of eight days, and stayed with the same family with whom I boarded earlier. The dry season had come, and many people were busy preparing the land for millet, which would be sown at the beginning of the next rainy season. Also beans and peanuts were harvested, as well as some maize.

The interpreter who had assisted me during the first weeks was not readily available in this week, so I had to look for a replacement. Two substitutes were found: Casiano Baijgaya, one of the sons of the family I boarded with; and Max Twinomugisha, a girl who worked as a clerk for the Nyakibale parish, but who resides in Kahoko. Their advantage was that they knew Kahoko and its inhabitants quite well, and therefore could easily direct me to the people of most interest for the research. Casiano is a teacher, as well as an agriculturalist. He has finished secondary school and is fluent in English. Max is less fluent in English, but her advantage was

that she is a woman. I intended to interview women as much as possible with her aid, and men with Casiano's aid, but for practical reasons this was not always possible.

Although the idea was to conduct more depth-interviews during this period, it often turned out to be difficult. Continual interruption for two translations proved an obstacle for respondents to answer freely and openly. The answers were often short and sometimes communicated to me by the interpreters in abbreviated form. Sometimes they attempted to interpret the answers in their translations. Later on this improved somewhat. The advantage was that I had ample opportunity for asking questions, both before and after an interview. Not only did I learn more about malaria in this way, but I also got to know a lot more about the (underlying) culture. Generally speaking, I was not entirely satisfied about the interviews that were held in this week. Although I managed to broaden my knowledge and was able to make extensive observations, I also began to harbour doubts as to whether individual interviews with the aid of an interpreter are appropriate for the kind of research which is carried out in a community whose language the researcher does not speak. It was all the better, therefore, that group interviews had already been conducted during the first stage, interviews which were being led by a local interpreter who did not need to interrupt the discussions all the time for translation.

6.3. The patient

Observation Kahoko, 04-07-'93:

Edith is ill. She is the youngest daughter, aged seven, and has returned a week ago from a stay at Mbarare (80 km), where she helped out her elder sister. She has a headache, is given water to drink, and lies in bed a lot. She has to bathe herself with cold water. Some leaves are rubbed on her temples.

05-07-'93:

Edith is still ill. Teddy (her mother) is going to buy two tablets of chloroquine today. This morning she gave one. I came into conflict with Teddy, I can't just watch, merely interested, while knowing she isn't taking a quarter of the necessary dosage, can I? I explain to Teddy about the diet, who responds by giving her that one pill. Doesn't she hear me, or is it that she doesn't want to believe me?

Later:

Edith feels a lot better now, she is up and about already; I wonder if she is going to take more tablets.

06-07-'93:

Edith has recovered and is not given any further medicine.

This 'secret' observation of the family with whom I boarded exemplifies a general mode of behaviour toward a suspected omushwizha patient: First the 'home remedies' are tried, like the use of cold water and the rubbing of herbs on the temples. The next step consists in (biomedical) medicine: chloroquine. As soon as the symptoms disappear, however, the treatment is stopped. During a conversation I had with the mother on 04-07-'93, she told me this:

"What about this one (Edith)? How did she start being ill, could it be omushwizha?"

"She started with suffering from headache, feeling much heat, when you touch on her."

"Fire?"

"Yes, fire. Then coughing."

"But do you think it is omushwizha?"

"Possibly."

"So what are you going to do about it?"

"Tablets for headache, she gives her tablets for headache (...)."

"And is there nothing else you do before?"

"Pouring water in the head, so that it releases the heat."

"Anything else?"

"(...) There is a certain herb, called mukasimarofa, then they rub it in the what, in these in the head. (...) They crush it, then afterwards they smear it on the sides of the forehead."

"How does the medicine work?"

"It enters the nerve, it enters the veins, then lowers the speed of the blood and then it makes the veins work well."

"It lowers the speed of the blood?"

"Yes, because when you touch the veins, you feel the blood is going faster when such a child is what, is suffering from headache. Then when it is smeared there, when you touch there after some time, you may find the speed of blood has a bit dropped."

She added that if the situation deteriorated, she would take her daughter to the hospital.

Other observations corroborated the same development: people are inclined to use chloroquine, but tend to stop the treatment as soon as the symptoms have disappeared. Another 'secret' observation:

Nyamanyengye (1 km from Nyakibale), 14-08-'93:

Jassy's little boy has omushwizha. He lies on a small mattress on the floor. Jassy goes out to buy medicine, and I join her. She brings 200 shilling. At the shop she asks for chloroquine, but the shopkeeper only has Maxaqin (a more expensive brand name of chloroquine), in packages of two tablets. They costs 50 shilling each, and Jassy buys two. 'Why two?', I ask her. 'See if it works,' she answers, 'or else we take him to the hospital tomorrow.' Yet she asks for my advice. I tell her that in fact her son needs to take another two tomorrow, and one more the day after. At home she gives him one tablet, and tells me she will give him the other one after dinner.

In these cases it was rather quickly assumed that the child suffered from 'omushwizha', or in any case from a headache, and was thus given a treatment which was considered in accordance with this. Below a situation will be outlined in which it was not clear beforehand that the child suffered from omushwizha:

He (the father) recognized the illness of his child (3,5 years), when the child was already suffering for three days, on Friday evening. The child was suffering from coughing, headache, he used to feel coldness, also omushwizha. The wife was the first one to recognize. He took the child to the clinic on Saturday, that was the fourth day. Before that, the child was given 2 aspirins and 4 chloroquins, which the father bought on Friday evening.

At first they thought the child was suffering from 'engundu', then the mother looked for herbs to drink and for washing. This was on Thursday. After that there was no change. The situation became worse:

"It become worse even? In what way did it get worse?"

"The child did not vomit."

"The child did not vomit?"

"After taking that medicine of engundu."

Although at first I reacted with surprise when I learned that the child's physical state was deteriorating because it had not vomited, this became clear later on, during talks with local healers: the child is supposed to respond to the engundu treatment with vomiting. If it does not, then apparently it must have been some other disease, in this case omushwizha.

Clearly, it is difficult in young children to distinguish between 'engundu' and omushwizha on the basis of symptoms.

A number of other sick people were visited and interviewed. One woman stated that she had caught her omushwizha in Kasese (Western Uganda):

"Why did you get omushwizha from Kasese?"

"Because of mosquitoes."

"Mosquitoes?"

"Mosquitoes from there, my blood is not used to them." (old woman, Kahoko)

A similarity with 'food from there', because the 'enjoka' (snake) is not used to it, is striking. The mosquitoes have been incorporated within the local medical system: just as the 'enjoka' may cause omushwizha because it has not yet adapted itself to strange food, the strange mosquito may cause omushwizha because the blood has not yet grown used to it.

An old man also told me that he had caught omushwizha from elsewhere. In this case it was the food from there which had given him omushwizha:

"Now what is it in Kamwenye that might have caused the omushwizha?"

"He thinks it is the food he ate from there (...)."

"So those foods are they different from the ones here?"

"He thinks they are the same, but from different soils." (old man, Mutooma)

The mother of a sixteen-year-old daughter told me that she had taken her daughter to a state clinic three times already. There she was given aspirin and chloroquine, "and they even gave her injections". However, the patient did not recover, and should be hospitalized, but there is not enough money to do this.

The mother had no idea about the cause of omushwizha. However, she was certain that it is omushwizha, despite the patient's lack of response to the omushwizha treatment. It is because the child vomited, had a headache and started her period of illness with shivering.

The certainty with which the mother stated that her daughter suffered from omushwizha is striking in the previous observation. Within the biomedical perception this kind of certainty would only be possible if the cause had been identified. In this case the mother did not even know the cause, but was 'certain' on the basis of the mentioned *symptoms*.

What is also striking is that people tend to turn to biomedical treatment quite early. The perceived effect is estimated on the continuation or disappearance of the symptoms. This was further illustrated by a woman, aged 39, who had just been through a period of omushwizha-illness:

"And how does she know it is omushwizha? Could it be any other illness?"

"They gave her medicine for omushwizha and she got healed."

She also explained how she caught omushwizha:

"She thinks it comes from blood."

"From blood? How?"

"Being attacked by sunshine, (...) it becomes diluted, because of sunshine."

Prevention, according to her, is not really possible. She has to work anyway, and hard labour is one of the factors which facilitate increased susceptibility to omushwizha.

Her children, who also suffered from omushwizha, were said to have caught it on the wind. By chance I noticed that one of the children of the people who live near the hospital was wearing a piece of string around her wrist. 'What is it for?', I asked. 'For diseases of the wind,' I was told. Only young children may be afflicted. The mother informed me that omushwizha is not a disease of the wind.

The previous observation, in which mosquitoes have no part whatsoever, clearly exemplifies local, traditional perceptions of malaria, but in which biomedical medicine is used. Their effect consists, as I have already noted, in the disappearance of symptoms.

The observations and interviews from this stage of the research complement and verify earlier information which was obtained from the group discussions. The results are roughly in line with one another. However, it appears that people use biomedical tablets much more often than expected on the basis of information gathered from the group discussions. Moreover, people rarely complete their cures.

The hypothesis of omushwizha as symptom versus malaria as cause still holds, after new information from this stage has been assimilated.

6.4. The healers

Both during the first stage and the second stage field work some interviews with and observations of local healers were made. These include both 'traditional' healers, as well as providers of 'biomedical' care and medicine. It concerns people in or outside Kahoko, who are consulted by the people of Kahoko. First, the 'biomedical providers' will be discussed, in the same order as a local would consult them (i.e. from the little corner shop to the big hospital in Nyakibale). This is followed by a discussion of the traditional healers. The interviews were not restricted to the healers which exclusively treat omushwizha, but extended also to healers who treat related diseases.

6.4.1. The 'biomedical' providers

(a) the grocery shop

Kahoko, 04-07-'93:

Casiano and I are waiting for Charles, the shopkeeper, in his little shop, for we want to make an appointment with him the day after. His son is looking after the shop now. A little boy comes in to buy some chloroquine for someone else. I ask the son how much he gave him, 'Two,' he says, 'because that's what he asked for.'

The grocer's, or the corner shop, is the first in the line of biomedical providers. People come there to buy medicines, just like we would buy aspirin in the shops here, the difference being that antibiotics and other medicines (such as chloroquine), for which we would need a doctor's

prescriptions, are freely on sale there. The grocer explained to me that most people know what they want, and also determine upon the dosage themselves. The grocer himself did not know the exact workings of the medicines. He did know that:

"Aspirin helps for headache, then chloroquine helps for fever. (...) Maxadol (paracetamol) also helps for fever and also for headache."

It is striking that no distinction is made between paracetamol, which indeed induces a decrease in temperature, and chloroquine, which attacks the malaria parasites in the blood (which may eventually also temper the fever). It proves once again that 'omushwizha' is thought of in terms of symptoms, just like headache and fever are within the biomedical system.

When asked how patients know for which medicine to ask, he replied:

"If he feels his omushwizha needs chloroquine and Maxadol, he devices both, if he feels chloroquine is enough, he advices chloroquine. That some people, if they come from the hospital, they give a certain kind of medicine, then next time when he suffers from the same disease, omushwizha, he goes to the shops knowing that when he went to the hospital he was given that type of medicine, then he comes to buy that one. (...)"

"Does it mean that some medicines match with some patients?"

"Yes, it depends upon the patient."

He explains that for him the best cure for omushwizha is chloroamphenicol. (But chloroamphenicol is an antibiotic specifically used for typhoid patients.)

The particular type of medicine, again, does not depend on the cause, or on the causative agent, but on the symptom, or on the person who displays the symptom.

(b) the 'clinic'

The term 'clinic' refers to a health care station, a sort of chemist in which a person with some medical training is employed. Some of these chemists are initiated by the church, others operate on a commercial basis, while yet others are state enterprises. The former two have better reputations than the latter one. In spite of the fact that the latter offers, or is supposed to offer, free help and medicines, people prefer clinics on a commercial or Christian basis.

In Kahoko there is one 'clinic', which was initiated by the Protestants, but this clinic was only very recently put into operation. So far it has not yet attracted many people, but for eight of the average ten people per day who do come there, chloroquine is prescribed. This is done on the basis of anamnesis, and not on the basis of blood tests (as happens at the hospital).

There is a state clinic about four kilometres away. When we visited the place, we were met with considerable suspicion. The health care worker did not want to divulge more than that he sees about a 100 patients¹⁸ a day, of whom the majority suffers from malaria.

The nearest 'real' clinic is in Rwerere, about eight kilometres from Kahoko. This is where people go when home remedies, herbs and tablets from the shops have (finally) proven useless. It is a commercial clinic which is staffed with one nurse. It is equipped with a reasonable amount of medicine, especially antibiotics and anti-malaria remedies. There are not many

¹⁸ This is quite a lot for just one morning. Later on, people told me that he probably gives these figures in order to sell the medicines which he distributes among 'paper patients'. The result is that when patients do actually show up, there are no free medicines left, so they have to buy them anyway.

diagnostic instruments: a thermometer has to determine whether a person is suffering from malaria, and if so, from what kind.

"When a patient comes in with malaria, I first take the history of the patient, he tells me, or she, after telling me, then I examine her, take the temperature, and then I give the treatment according to the temperature."

Although this nurse has received reasonable training within the biomedical system (at Nyakibale Hospital), she still approaches malaria as a 'symptom'-disease: the temperature, in other words the expression of the disease, determines the treatment, and not the cause.

Apart from that, she appears to provide advice and therapy more or less according to (bio)medical perspectives. She prescribes the correct dosages, refers people to the hospital if necessary, and offers education on the prevention of malaria. A number of things is striking, however:

- * "What if the chloroquine doesn't work, to they come back?"
"Yes, they come back and then, so that I change the treatment."
"And you change it to what?"
"There are so many of them, there is Maxaqin, Homaquin, Malaraquin and this Camaquin (they are all chlroroquine, except Camaquin is amodiaquin). It depends on how he reacts on the first dose of treatment."

So it is not the chemical composition of the medicine or the physical workings of the substance in the body which determine the choice for a certain therapy, but it is rather the outcome of whether the symptoms disappear or not which renders a medicine effective or not.

- * She told me that malaria can also be transmitted via unboiled water.
- * Malaria is contagious, according to her.
- * When asked whether pregnant women perhaps constitute a high-risk group, she answered:

"But usually when you are pregnant, you don't move so much, so it is rare to get malaria."

Evidently, she operates in the grey area between 'traditionally' oriented and biomedical perceptions. Although she is familiar with the biomedical notions of cause, treatment and prevention, a number of more traditional perceptions remain to dominate her frame of reference. Most striking in that is the prevalence of the 'symptom-idea', although she does prescribe complete anti-malaria cures¹⁹.

(c) the hospital

Patients in serious conditions or patients who have not recovered after earlier treatment are taken to the Nyakibale Hospital. If the patient cannot walk, he or she is brought in on a stretcher.

At the hospital, the patient is examined, blood is taken for diagnosis, and, depending on the seriousness of the patient's condition, a dosage of chloroquine or kinine is administered (either orally or intravenous). On admission the patient can be observed and the cure can be

¹⁹ It has to be borne in mind that not infrequently patients simply do not trust salespeople who prescribe large dosages, for it is assumed that this is only done for commercial reasons.

completed. In case an out-patient treatment suffices, medication and instruction are given to the patient to take home.

6.4.2. The traditional healers

Within the 'traditional circuit' a distinction can be made into various treatments of 'omushwizha' and related diseases. On the one hand there are herbal healers, on the other there are also witch doctors, who are able to exorcise evil spirits. The intermediary form is the healer who is able to expel charms from the blood. Also, 'engundu' (a traditional disease, cf chapter 5, section 5.4.2.) can be treated or prevented with the use of herbs.

During the first and particularly the second stage field work, interviews were held with traditional healers. During the second stage some observations were also made. A sum total of six healers was interviewed, all of them women and most of them middle-aged or older (40 to 70 years old). It was mostly the interpreters who referred me to them.

A certain difficulty existed regarding the choice of these healers: if mostly they did not think of themselves as healers of 'omushwizha', I could think of them as healers of malaria from my frame of reference. An example: headache and aching joints are common symptoms of malaria. From their perceptions, however, they treated either the pains, or the underlying charm or spell. The same goes for 'engundu'. This is the reason why these kinds of healing will be discussed here. Furthermore, it offers a more general idea of local perceptions of illness, to which perceptions of malaria may be related.

The following topics will be dealt in consecutive order: the treatment of 'omushwizha' with the use of herbs, the healer of 'charms' and 'spirits', the traditional treatment of headache, the treatment of 'engundu' (convulsions), and, finally, the treatment of 'enjoka' (snake or worms).

(1) *Herbal healers of 'omushwizha'*

The treatment of omushwizha by a herbal healer is more or less similar to herbal treatment at home (by the mother). The main herb, again, is 'omubilisi', of which the leaves or roots (if necessary mixed with other, also bitter herbs) are mashed, boiled in water, and then (after cooling off) given to the patient to drink. Having drunk the substance, the patient should vomit and get diarrhoea.

"I boil them (the herbs), then in the morning I put it in a bottle, you get well. When it reaches the stomach, it cools the fire, then you get well." (herbal healer, Nyakagyeme)

The same herbs are used for the patient to bathe in:

"I bathe the patient with the medicine which has stayed a night (...) also with that medicine, because I want that heat to leave the body and gets well." (traditional healer, Kinyamahwa)

The function of the herbs, then, is to cool down the heat, or 'the fire', in the body. They are therefore administered in cold form.

The disease may also leave the body through vomiting or diarrhoea:

"Can she tell me how the treatment works in the body?"

"When it goes inside the stomach it filters out the bad things and then it pushes them out (...)"

"She says you take the treatment, then you vomit out the bad things?"

"Yes. Even the one who is bewitched, it is just like the same." (traditional healer, Kinyamahwa)

So the 'bad things' leave the body through vomiting or diarrhoea; a bit later she called it 'breaking the bile'. The 'rule of opposites' does not apply here: bitter herbs (omubilisi and others) are used to break the bitter bile,

"Then she says this sour, bitter omubilisi, that because of being bitter, they can be stronger than omushwizha."
(grandmother, Kahoko)

the more bitter, the stronger, it seems, and that force is necessary to overpower the omushwizha.²⁰

We also see that this traditional healer, without pausing for breath, mentioned the 'enchantment', and the treatment which appears to be similar. These will be discussed in the next section.

(2) *The witch doctor*

Although witches and witch doctors have been banned and prosecuted by the church (they were said to encourage people into jealousy and mistrust), many people still believe in them, even relatively highly educated people.

There seems to be a distinction between the more 'spiritual' enchantments and the more physical, or visible. I have not much concerned myself with the first kind, for these appeared less common, or anyway did not come up often during conversations. One traditional healer mentioned 'spirits' or 'lesser gods' who may 'possess' one. The required treatment would then be to let the spirits talk through the person, and then to overpower them:

"Then I will tell my own gods, or powers, to overthrow, or take over those (powers)." (traditional healer, Kinyamahwa)

This 'disease', by the way, she termed as 'omushwizha because of certain family things'.

In addition, one may also be enchanted by someone (usually a woman) who puts charms into someone else's drink, or who puts them into the ground, after which, when someone steps over them, they enter the body. They will cause pain in places, for instance in the joints.

If the charms have entered the body orally, the treatment is focused on throwing them up, by means of administered herbs.

"How does she treat charms?"

"When a person is given charms, she gives them medicine for vomiting, then the person vomits the charms."
(traditional healer, Kahoko)

Charms which have entered the blood stream by a person's having stepped over them, are treated with 'okurumiko': an incision is made on the spot where it hurts. Then, a little horn (the top of a cow's horn), *ekirumiko*, is put on top of it. Little leaves are folded around the spot

²⁰ This bitterness is also characteristic of chloroquine and quinine. This is the reason why people have faith in these medicines; I was often told that these tablets are probably manufactured on the basis of these herbs.

which operate as a kind of valve. The little horn is then sucked vacuum on the skin. The blood, which contains the charms causing the pain, is thus sucked out (see appendix 6).

Observation Kahoko, 06-07-'93:

A patient comes in, she has pain in the bone marrow, and on the chest. She has been suffering from the pain for three months, she didn't use any treatment before. As the ekirumiko (horn) is on her chest, she feels some things going into the ekirumiko, she says. When Modesta, the healer, takes the horn away, blood and pieces (mud?) come out. That is unnecessary blood. Those pieces are the charms, they look like little black lumps; they are the ones that caused the pain.

So the treatment of charms is aimed at eliminating them, either through vomiting, or by means of expelling them from the blood.²¹

A similarity with omushwizha²² seems obvious: one may also recover from omushwizha by vomiting up (the broken bile). But sometimes also 'bad blood' is extracted as a treatment of omushwizha. This is discussed in the next section.

(3) *The traditional headache healer*

Headache, which is seen from both local and biomedical perspectives as one of the main symptoms of malaria, is treated by the traditional healer by means of bloodletting: a small incision is made on the forehead, in order for the bad, black, but also unneeded and unwanted blood to leave the body (see also appendix 7).

"How does she treat headache?"

"She looks for a razor blade, then she cuts here, then she puts there medicine (grey ash) (...)"

"She cuts here (on the forehead)?"

"Yes, okushandaga (...). When it is too heavy she puts there ekirumiko (...)."'

"Right, and how does the treatment work?"

"(...) That blood she removes from the body, it is unwanted blood." (traditional healer, Kahoko)

Another healer explained how omushwizha makes the blood turn bad:

"How does omushwizha make the blood bad?"

"When you get high temperatures and the blood clots, you get pain. Omushwizha pulls the blood, then it clots. Omushwizha brings heat, that heat pulls the blood, that blood clots. Where it clots, I remove." (traditional (ekirumiko) healer, Kantojo)

So both charms and omushwizha may act upon the blood, turn the blood bad (omushwizha), or put charms in it. For both the necessary treatment involves extracting blood, either black and clotted or full of charms, from the body.

(4) *The 'engundu' healer*

During conversations with traditional healers who treat 'engundu', it gradually became clear what this traditional disease, as it is called, really is, although each of them did shade their stories slightly differently.

²¹ This kind of treatment is also practised in the south of Zaire: Janzen (1978) describes how aching joints are similarly traditionally treated there.

²² However, when asked whether charms may also cause omushwizha, people invariably denied this.

Some children are born with 'engundu', for it is hereditary, just like the colour of the skin or the eyes. Not every child, then, is born with it. One healer distinguished between three stages:

- engundu: two years and younger
- ebiyaga: two to ten years
- ensimbo: ten years and older.

The first two stages can still be treated, the last, in which a child keeps falling down, cannot. Only at this point it became clear that the disease resembles epilepsy: the falling disease.

The first stage, engundu, is characterized by frequent crying of the child. Ebiyaga is characterized by convulsions, or:

"When he has ebiyaga, he starts dying every now and then, he looks like when he's dying." (traditional healer, Kahoko)

Finally, ensimbo — just like ebiyaga a local word for convulsions — marks the stage in which no further treatment is possible.

When asked about similarities between engundu and omushwizha, the healers simply came up with differences. These differences, however, are not unequivocal. The main difference, nevertheless, lies in the fact that omushwizha reacts to an omushwizha treatment, while engundu does not. Indeed:

"You can't take that one to the hospital (...), in case that person is injected, then that patient dies." (traditional healer, Kahoko)

Engundu can only be treated in the traditional way, with the use of herbs:

"She puts medicine in the nose and the mouth. And she mixes some herbs with water and then pours the herbs with the water on the whole body of the child, the patient. (...) she also uses roots of herbs, then she chews them and then spits the medicine in the mouth of the child." (traditional healer, Kahoko)

Someone else said this:

"When he takes that treatment (herbs) and drinks it, then it reaches where that sickness is and that sickness is driven out, it just works like the omushwizha-treatment." (old man, Kinyamahwa)

This was confirmed by a traditional healer, who said that the child needs to vomit, because "then you know the child is getting well".

Again, the treatment consists in 'getting hold' of the disease somewhere in the stomach, and then to drive it out by means of vomiting or diarrhoea.

Although 'engundu', as has been noted earlier, is probably equal to biomedical epilepsy, it also resembles malaria. Malaria may also lead to (feverish) convulsions, particularly in young children, but it may also engender cerebral malaria, which causes a patient to lose consciousness.²³ Apart from that, the observations and interviews revealed that people may sometimes mistake engundu for omushwizha and vice versa.

²³ Note that the confusion once again arises because local perceptions depart from the symptom (convulsions), while from the biomedical perspective this particular symptom can be seen as an expression of several possible causes.

(5) *The 'enjoka' healer*

The 'enjoka' (intestine) may cause omushwizha, as we have seen in chapter 6. It is also a disease in itself (worms), and, on top of that, everybody appears to have an 'enjoka' (snake):

"Is there any way in which enjoka can be prevented?"

"They cannot be prevented."

"Why not?"

"A child is born with them (...), even you, you have got." (traditional healer, Kahoko)

"If you drink for example bad water, then they multiply." (interpreter)

"Enjoka cannot enjoy the food, then the person suffers from omushwizha." (traditional healer, Kahoko)

The enjoka (worms) can be treated with herbs. This way, they may be disposed of through the excrement. As an elderly woman stated:

"Because of worms, she vomits some white things, then she knows it is not omushwizha, instead they are worms, they are the ones which were spitting, spitting inside (...), then she vomits what the worms were spitting. (...) The worms are now many inside (...), now she was not used chewing tobacco, but because of the worms who was forced to chew tobacco. They believe it is medicine for what, also because of being bitter." (grandmother)

Bitter herbs²⁴ are used for worms, practically the same as those which are applied for omushwizha.

So everybody has an enjoka (snake); bad food may cause them to multiply (worms), and these worms need to be treated with bitter herbs. In this way, they may leave the body. In addition, the enjoka (snake or intestine) may cause omushwizha when it is brought to revolt by means of 'strange' or 'bad' food. In that case, again, the treatment is aimed at removing the disease, omushwizha, from the body. Again, bitter herbs are used to break or expunge the bile, or "the solid thing inside".

Eating habits also need to be adapted: if one suffers from omushwizha, one needs to eat bitter or sour²⁵ fruit (like for instance passion fruit), instead of sweet fruit:

"Of course you can't take those, the blood, because it is hot, it can't stand the sweetness of those foods."

"Now what if you still eat them?"

"You will vomit, because the omushwizha can't stand it. The omushwizha can only take sour, or bitter, no sweetness." (old man, Kahoko)

The same sweet 'forbidden fruits' were mentioned in the group discussions as causes of omushwizha: maize, mango, pineapple and sugar cane.

The existence of the enjoka is confirmed in the literature (Varkevisser, 1973), which in Mwanza, Tanzania, is called 'nzoka'. The 'nzoka' may react to the wrong kind of food, and thus cause

²⁴ Ekishakashekye, omutondigwa and even omubilisi.

²⁵ The local language has one word which refers both to 'bitter' and 'sour'.

vomiting and diarrhoea. The 'nzoka' may also react to the heat of the sun, by throwing up poison from the body, and thus causing illness.

6.5. Discussion

From the interviews with and observations of traditional healers, it appears that omushwizha fits in the spectrum of local diseases. It seems to be most intricately interwoven with the notion of 'enjoka'. Also, in comparison with other 'traditional' diseases such as 'engundu' or 'charms', we hit upon the same pattern time and again: a disease resides in the body (usually the stomach), and its treatment is aimed at expelling the disease with the use of herbs through vomiting, and sometimes also through excrement.

Besides, some diseases (such as headache and 'charms') may be driven from the body by means of bloodletting.

The blood and the intestine, a common line of division between other diseases, are both part of omushwizha (just like they are, for that matter, of 'charms').

Table 6.1.: Subdivision of local diseases into place and activity in the body: blood or intestine.

	blood	intestine
omushwizha	+	+
headache	+	-
enjoka (worms)	-	+
engundu (convulsions)	-	+
charms	+	+

Incidentally, this being part of two categories of diseases has already been noted in the discussion of the causes of omushwizha: some causes of omushwizha belong to the 'blood category' (the elements, for instance), and some causes operate through the intestine, or 'enjoka'.

If we compare the group of biomedical providers of health care with the group of traditional healers, we see that people have a much better understanding of traditional than of biomedical ways of treatment. And yet people often turn to biomedical medicine for the treatment of omushwizha. They try to explain the workings of these medicines through the locally prevalent idea of 'symptom'. It is therefore no surprise that people tend to stop the treatment once the reason — the symptom — has disappeared. Further, it seems probable that people's trust in the bitter tablets of chloroquine and kinine is not undue to the similar bitterness of their own herbs. The research, however, did not focus upon the incorporation of biomedical treatment within local perceptions. Statements on this matter are therefore founded more on plausibility than on reliable and valid research.

7.1. Introduction

The most conspicuous differences between omushwizha, as seen in local perceptions, and malaria, as seen in biomedical perceptions, can be summarized as follows:

- Omushwizha refers more to a symptom, whereas malaria refers more to the cause of a disease.
- The symptoms of malaria and omushwizha are practically the same; furthermore, they are quite easy to recognize.
- There are some traditional diseases (like for example engundu) which are seen as different from omushwizha, but which may refer, nevertheless, to malaria.
- High-risk groups such as are indicated with regard to malaria (i.e. pregnant women and young children), are not indicated with regard to omushwizha. However, when confronted with the issue, people are indeed able to understand and explain it: for pregnant women have to share their blood with the unborn foetus, while young children have not yet developed strong bones, and their enjoka's have not yet grown used to various kinds of food.
- There are many causes of omushwizha, whereas malaria has only one cause. Prevention and treatment of malaria will therefore be limited to only a section of the various kinds of omushwizha.
- The treatment of omushwizha is aimed at eliminating the symptoms, while the cause is only partially eliminated, causing the malaria parasite to persist in the blood.
- More possibilities are indicated for the prevention of omushwizha than for the prevention of malaria. Their feasibility is often doubted, and not infrequently early treatment is used as a means of (secondary) prevention.

In this chapter an attempt will be made at linking up the local perceptions concerning malaria with a workable malaria prevention policy, and possible discrepancies between this and the malaria prevention policy as it is endorsed by the hospital will be discussed.

Malaria prevention policy will be defined as: all intended policy actions which are aimed at the prevention of malaria in the body (primary prevention), as well as those which are aimed at preventing the effects of malaria, such as cerebral malaria and death (secondary prevention). An example of primary prevention is the use of mosquito nets, which prevents direct contact between mosquito and human. An example of secondary prevention is the early treatment of malaria, after the first symptoms have manifested themselves, in order to prevent complications or eventual death.

In section 7.2., starting points for a malaria prevention policy based on local perceptions will be formulated. What would this policy ideally look like? In section 7.3., these starting points will be compared with the malaria prevention policy as it is advocated by the WHO. In section 7.4., the proposed 'ideal' policy, which is based on local perceptions, will be compared with both the actual and the intended policy of the Nyakibale Hospital. The educational activities in Kahoko will also be discussed. Section 7.5., finally, rounds this chapter off with a conclusion and some recommendations for a workable malaria prevention policy.

7.2. Malaria prevention policy based on local perceptions

A malaria prevention policy based on local perceptions will take these perceptions into account and translate them into biomedical perceptions, from which the malaria prevention policy starts. This still concerns, however, a policy on *malaria*, not on omushwizha.

This brings us straight to the first main focal point: it has to be understood that this policy reaches only a part of all omushwizhas, and this will have to be made clear also to the local community at whom the policy is aimed. There are consequences both regarding the treatment as well as the prevention of malaria: omushwizha can only partly be treated and prevented. With the aid of health education, the difference may be clarified.

As noted, the symptoms of malaria are clearly recognized; they largely correspond with those of omushwizha, and offer a good starting point for a malaria prevention policy. For the eradication of malaria, a remedy might be found which operates on the basis of this recognition of symptoms. As is presently the case, a malaria prevention policy might be aimed at elimination of the symptoms of malaria by means of early treatment.

Within the local medical system (secondary prevention), both herbs and tablets are used for the treatment of malaria. Assuming these herbs are harmless, the practice might well be sustained. If nothing else, it still has a positive placebo-effect. Furthermore, it may be possible that these herbs do cure omushwizha which is not malaria. If recovery, however, fails to occur (and this is already quite often perceived), a treatment based on cause might be in order. In practice we also find that in case of persistent symptoms, people turn to the biomedical circuit. Chloroquine, however, is used as a remedy for a particular symptom, just like paracetamol is used to bring down fever or to alleviate a headache. Fighting the symptoms of malaria with the aid of biomedical remedies would, however, be disapproved of in biomedical thinking. For this means that the cause of malaria — the parasites in the blood — will not always be eliminated, since the cure is generally not completed. This will have to be explained to both the community and the providers of medicine. Whether such a substantial shift from symptom-thinking to cause-thinking will be easily accomplished, however, remains doubtful. This would involve not merely health education, but especially general education.

The prevention of malaria based on local perceptions does not focus primarily on primary prevention. Either the indicated means of prevention are not specifically aimed at malaria (such as encouraging hygiene), or the effects are doubted ('the mosquitoes will sting you anyway'). Finally, treatment is also regularly mentioned as a possibility for prevention. This and the earlier mentioned 'symptom-thinking' would plead for secondary prevention, in other words early treatment as a strategy for malaria prevention. Only when the body is in disharmony are efforts being made at restoring the balance. Unfortunately, a medicine which might serve as a symptom remedy has not yet been found. The task will be to explain to the local communities that an anti-malaria cure can only be effective when fully completed. Sadly, though, even this may not be enough these days. The present practice, i.e. to visit a hospital when the symptoms do not disappear, can therefore be encouraged.

Before translating these focal points to a workable policy on malaria, I will discuss the policy on malaria as it is implemented by the WHO, as well as the policy endorsed by the hospital. The resulting discrepancies will lead to a discussion, a conclusion and some recommendations.

7.3. The WHO and its policy regarding malaria

The World Health Organization advocates, with its efforts to curb malaria in the world, a policy which does not aim anymore at exterminating the disease, but which in my opinion is still rather too pretentious in its intention to control the disease. This is not so very surprising, since malaria is claiming an increasing number of victims. The main goal is to focus on prevention, particularly primary prevention, but secondary prevention is also part of the goals. Furthermore, epidemics need to be detected at an early stage (Malaria Action Program, 1992).

Primary prevention should aim for personal protection, with the use of impregnated mosquito nets, protective clothing and mosquito oil. Pregnant women are advised to use chemoprophylaxis. In addition, breeding grounds of mosquitoes should be detected and eliminated, and the houses should be sprayed with insecticides.

These measures need to be complemented with extensive education aimed at the local community, for which educators need to be thoroughly trained.

With regard to **secondary prevention**, the WHO emphasizes the importance of early recognition and early treatment of the disease. The first line ought to be equipped with microscopes to be able to diagnose the disease, in order to avoid unnecessary treatment.

Regarding the realization of these plans, it is noted in one of the last sections that the effectiveness of these measures will also have to be tested, particularly in view of social and cultural factors.

A striking feature of these plans is the apparent shift from control toward eradication of malaria: if in 1984 the main objective was early diagnosis and treatment through participation of the local community (WHO, 1984), it now appears that although eradication is recognized as an unattainable goal, it is nevertheless the ultimate goal at which all measures are directed. (Presumably, the explanation is the ever increasing threat of the disease.) One of the reasons for emphasizing secondary prevention was to maintain the community's level of (semi-) immunity (for which continual exposure to the disease is required), in order to prevent epidemics and many deaths from happening (Silva a.o.).

Presently, the WHO advocates an extensive prevention policy, which needs to aim for both primary and secondary prevention of malaria. In the next section we will see that the malaria prevention policy pursued by the hospital reasonably agrees with the plans of the WHO.

7.4. The hospital and its malaria policy

7.4.1. Introduction

In order to gain an impression of the Nyakibale Hospital's present malaria policy, several interviews were held with respectively: the Community Health Nurse, local health care workers

from Kahoko (the Community Based Health Care team), the physician responsible for the as yet to be started malaria project, and the Dutch physician who is the only foreigner working at the hospital. In addition, a group discussion was later held with the management team concerning the outcome of the research and the possible implications for the actual policy on malaria.

Although a malaria project team was appointed in 1992, it is presently still unclear how this project will be operated in the future. Although a start has been made on the arrangement of a malaria plan, the person in charge of this will stop his activities on this matter. How and by whom he will be succeeded is presently unclear. This hampers an actual comparison between local perceptions of malaria and a malaria policy plan, but the objectives and strategies concerning malaria as mentioned by the interviewees will be taken as starting points.

7.4.2. The present activities in Kahoko

The hospital offers health care education once a month, which is given by the Community Health Nurse. Unfortunately, I did not get the chance to experience these meetings, for the two times I was going to be there the villagers did not show up.

In addition, the Community Based Health Care team gives education itself in Kahoko. The team consists of ten people and conducts educational meetings in which particularly hygiene is discussed. Furthermore, they visit at home in order to check hygiene. These visits I had to miss also. However, some interviews were held with those in charge of education. Besides the CBHC-team, the church and the RC-1 also engage in health education, while health education is also taught at primary school.

Education, then, focuses on hygiene in and around the house. People are instructed — and checked — to have a latrine, a place to bathe, a clean kitchen, sufficient food, and a place to keep the pots and pans in clean condition. In addition, some education is given on the topic of diarrhoea, and people are instructed to boil their drinking water.

When asked for information about malaria education (people did not come up with this themselves), they replied:

"Malaria is a complicated disease to us. We, for us we always advise these people if somebody is infected with malaria, to be rushed to the hospital, because it is a severe disease." (CBHC-secretary)

In addition, people are instructed that the cause of malaria is the mosquito, that they need to keep their gardens tidy, and that they have to take care not to give the mosquitoes the opportunity of breeding in stagnant water.

When asked about the difficulties one meets with in health education, the CBHC-secretary named four: poverty, the ignorance of the villagers (for example concerning the necessary completion of the entire cure of chloroquine), the delayed transference to the hospital, and, lastly, the state clinic, which allegedly does not prescribe the right dosage.

"So, do people follow your instructions?"

"Some. (...) There is a certain improvement (...) but we have a few cases still going on, they don't hear anything, you tell them and they don't listen. (...) those people there they tend to be primitive, you can't tell them and they believe you."

"Aha, what would be the cause of them not listening to you?"

"Primitivity, they don't care. They think digging is very important, much more important actually than going to the hospital." (CBHC-secretary, Kahoko)

"Some old people are old fashioned, they say they can't clear their bush. Also some young people refuse. Because Africans are very strong, they can't be killed by these small diseases." (CBHC-member)

"Other difficulties, we have got a problem of our men here. They are not inclined in cultivations. They want all the time to keep hanging around the drinking places. Whereby the women (...) really work from morning up to sunset. That is a big problem here, men don't work to help their wives." (chairman R.C.-I, also teacher in health education)

When a couple (of which the woman suffers from omushwizha, or headache) told me they never visit these educational meetings, their motivation was:

"Some followed them (the instructions) and they usually feel sick, so they decided not to follow them."

According to the CBHC-members, the answer to these problems must be found in the use of coercion and control, in co-operation with the RC-1.

Although the use of herbs is not discouraged, the emphasis in health education lies very strongly on the biomedical approach toward illness, including malaria. This is also the case for the education given by the church. The church particularly forbids people to consult witch doctors:

"Why he cannot allow, he cannot advise them to go there, is because if they believe in those gods, they will leave the supreme God, worship those gods." (cathechist, Kahoko)

The church also teaches acceptance, as noted also in chapter 5:

"In addition what he teaches is, it's God who gives life and then he is also the one who takes it away, so when you fall sick then you should go to the hospital. If God still wants you alive, then he will give you back your life, then you will be healed. And if he decides to take it, he will take it." (cathechist, Kahoko)

The fact that the emphasis in education lies on general hygiene might explain why this is often mentioned in group discussions as a possibility for the prevention of malaria. Another accent within education is formed by the precautionary measures taken to prevent diarrhoea. This might explain the frequent mentioning of 'bad water' as cause of malaria.

7.4.3. The present activities of the hospital

The present activities both in and outside the hospital concerning malaria are, briefly summarized, the following:

- At the hospital, malaria patients are examined and treated (biomedically), both at the out-patient clinic and at the clinic itself. They are also given some education concerning the prevention of malaria, which means that they are advised to eliminate stagnant water around the house, to take care the banana trees do not grow too close to the house, and to close

windows and doors at nightfall. This was reported by the Dutch physician, but I have not been able to confirm this with observations. Besides, the Community Health Nurse gives education twice a week to people who visit the out-patient clinic. Malaria is one of the topics she discusses.

— The Community Health Nurse gives education on malaria in the various surrounding villages. She instructs people to always complete the full anti-malaria cure which they have received from the hospital, she recommends certain preventive measures (such as keeping the house and its environment clean, and getting rid of stagnant water), and she advises people to visit the hospital if they suffer from malaria. She has also trained the local Community Based Health Care teams, in order for them to pass on their knowledge through education to the local community (see appendix 8).

— The Community Based Health Care team of Kahoko also gives health education in the village, and it visits at home, in order to check hygiene in and around the house. The education is also mainly concerned with general hygienic measures.

The activities, then, have both a curative and a preventive component, both in and outside the hospital. However, particularly the preventive element needs some improvement, according to the two physicians. There should be more and better education, the hospital itself should serve as a better model, and impregnated mosquito nets ought to be introduced, both at the hospital itself and in the surrounding villages. The Community Health Nurse and the local health educator added that the villagers need to be even more stimulated or forced to listen to and follow the precautionary measures regarding health.

7.4.4. The intended activities

The background of the intended malaria project is made up by the high malaria morbidity and mortality of the district, and also of the hospital. The malaria plan aims at decreasing this, and proposes to use the following means:

- giving the people health education concerning the prevention of malaria;
- creating general familiarity with the correct use and dosages of anti-malaria remedies;
- avoidance of the contact between human and mosquito by means of mosquito nets, among other things, and eradication of mosquito breeding grounds;
- distribution of prophylactics to high-risk groups (a range of 80% is aimed for);
- starting a good system of referral within the primary health care system;
- visiting all surrounding villages on a regular basis, identifying malaria patients, giving them treatment and education on prevention, possibly distributing mosquito nets; this would have to be done by a 'mobile malaria team' consisting of health educators, field workers and -nurses, a laboratory assistant, a physician, and a driver.

Moreover, the Dutch physician has taken a special interest in impregnated mosquito nets, which will probably be provided by a donor organization, for free. These nets definitely ought to be used in the hospital, which is presently known as a breeding ground for mosquitoes. This would lower the morbidity of malaria at the hospital and might also serve as an example for the community. There are also plans to distribute these nets at reduced prices among the local community.

It is not easy to distil a general, consistent view from these present activities and plans, but they might be summarized as follows:

- the head of the malaria project has a very ambitious malaria plan in mind which aims for a substantial reduction of malaria in the district by means of curative, primary and secondary precautionary measures, as well as a proper system of referral;
- the Dutch physician aims to focus particularly on the use of impregnated mosquito nets;
- the Community Health Nurse and the CBHC-team presently focus especially on the advancement of general hygiene, and not so much on the specific eradication of malaria;
- the CBHC-secretary wants to exert more pressure and force than is presently employed for people to comply with these precautionary measures, because they are still ignored to a certain extent.

Generally speaking, these plans depart from a biomedical view on malaria, and agree with biomedical ways of eradicating malaria.

7.4.5. Comparison with local perceptions

If we compare these matters with local perceptions of malaria, a number of things will be noted:

- (1) Malaria is considered to be a familiar disease, which is correct regarding the symptoms, but which is not always correct regarding the causes, for omushwizha is a larger concept than malaria. Moreover, traditional diseases which are in fact the same as malaria may be excluded from this policy on malaria.
- (2) Primary prevention is seen as an attainable goal, but the local community tends to doubt this.
- (3) Generally speaking, no clear preference is given to primary or secondary prevention, whereas in local perceptions a preference for secondary prevention exists.
- (4) No pronouncement is made on the present traditional treatment with the use of herbs.
- (5) The mentioned high-risk groups among which prophylactics ought to be distributed are not recognized by the local community (but the idea is not rejected either).
- (6) It is not clear whether mosquito nets will be accepted as a means for primary prevention. Presently they are not used, partly because of financial reasons, but also because people doubt the effectiveness. One may also be stung in the daytime, it is argued. Furthermore, it has to be realized that most families are quite large, and that one net per family will mostly be used by the parents, and not by the (much more susceptible) children.
- (7) Health education should be the key to all these discrepancies. However, in health education it is still very much assumed that the local community is familiar with cause-and-effect reasoning, an assumption which is rather too optimistic, in my opinion. General education should also be aimed for if one wants to be successful with malaria education from a biomedical perspective.

7.4.6. Discussion with the management team concerning the preliminary results of the research

After the completion of the field work and the elaboration of the preliminary results, a discussion with the hospital's management team was held on the basis of these results. The

following people attended this meeting: the medical superintendent, the Dutch physician, the anaesthetist, two Rwandan nuns, two medical assistants, the head of nurse-training, and the Community Health Nurse. Six main issues were discussed:

- a) How to deal with 'engundu' as a traditional disease, which in local perceptions is clearly distinguished from omushwizha, but which may in some cases be seen as malaria from a biomedical perspective?
- b) How to involve high-risk groups (young children and pregnant women) in the malaria prevention policy if the community does not always recognize them as such?
- c) How will the difference between malaria and omushwizha find expression within the malaria prevention policy?
- d) How to affect the local symptom-treatment (in which the chloroquine cure is often not fully completed) of malaria?
- e) Which standpoint to adopt regarding the traditional treatments with the use of herbs?
- f) Does the hospital want to focus on primary or on secondary prevention?

General agreement existed regarding the issues of (a), (b), (c) and (d), and it was concluded that these issues ought to be of specific concern in the health education programme. The disease of 'engundu' did yield some confusion: not everybody was familiar with the disease, and some said that people ought to be instructed that this disease does not exist, while others were of the opinion that a biomedical treatment of malaria, parallel with the traditional treatment, ought to be encouraged, and yet others proposed to narrow the definition, which would exclude malaria.

The issue of (c), i.e. the difference between malaria and omushwizha, was recognized by all, also with regard to the underlying difference of cause versus symptom. They also recognized, concerning issue (d), that people often do not fully complete their cures of chloroquine. One person mentioned financial reasons, but this was contested by others (one tablet of chloroquine costs 20 shilling, or one English pence; a complete cure costs 480 shilling, equivalent to the price of two litres of milk, or six bunches of 'matooke'). Education should also pay attention to the negative effects of partial treatment.

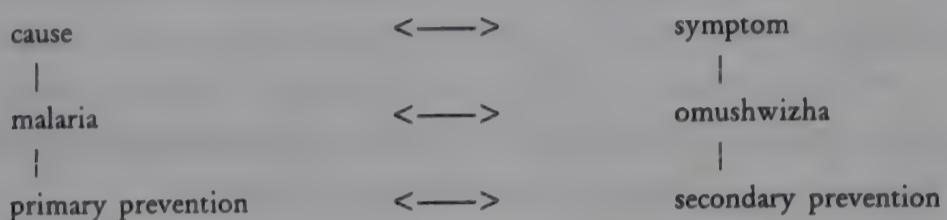
People responded in various ways to the issue of (e), the treatment with herbs. Most of them knew about omubilisi, and confirmed its effects by its bitter taste. One person was of the opinion that it might be dangerous to health, but this was contested by the others. Whether it is effective as a remedy against malaria, people could not say. The general conclusion arrived at was not to discourage people from using these herbs, since no real arguments against their use can be formulated, and because people will continue to use them anyway.

Finally, unanimous agreement existed on the issue of (f): both primary and secondary prevention are advocated. Primary prevention, with the use of mosquito nets, might at first perhaps be more expensive for the community, but it would pay for itself eventually. It was suggested to try it first in a pilot area, in order for the community to get used to it. The (public health) argument that in this way people acquire less easily (semi-) immunity was refuted. "If you would be suffering from malaria in Europe, wouldn't you use mosquito nets yourself?", one physician remarked quite to the point.

In general, most local perceptions were recognized, and sometimes even laughed at. Most of these, however, were thought to be adaptable to biomedical perceptions through health education, but I must confess I have my reservations.

7.5. Conclusion and recommendations

The main discrepancy between the intended malaria prevention policy of the hospital (as well as that of the WHO) and the policy formulated on the basis of local perceptions consists in the difference between primary and secondary prevention. This consists in turn in the opposition between cause versus symptom. Primary prevention is aimed at the cause, whereas secondary prevention aims at preventing the (serious) effects of the first symptoms. The concepts of malaria and omushwizha may also be categorized on the same dividing line:



While the hospital roughly advocates a malaria prevention policy on the basis of the left half of the scheme, a policy based on the right half will be more closely linked with the local community's perceptions. With these local perceptions in mind, it is argued to consider omushwizha primarily as symptom, and, as a logical conclusion, to focus mainly on secondary prevention. The community, indeed, already views omushwizha in terms of its expressions, or symptoms. It will not, however, be an easy job; a treatment of malaria based on symptoms has not yet been found.²⁶ Both providers and recipients of anti-malaria remedies will have to be instructed that these cures need to be fully completed. It is best to depart from the shortest regimen possible (for instance a three days' cure of chloroquine). The underlying motivation of this cause-oriented treatment will have to be explained, i.e. that the causative agents can only be eliminated from the blood by means of a complete cure, and that otherwise chloroquine resistance may be a backfiring side-effect. Within local perceptions malaria is also (partly) seen as a disease which affects the blood ('makes it turn bad'). It might be explained that the medicines need to be taken for an extended period, until the blood 'has turned good again'.

In this way, an opening might be found for shifting the focus at a later stage more toward primary prevention, which of course hinges on the idea of malaria as cause. Health education ought to be the precursor of eventual measures for primary prevention. Attention will have to be paid to the following issues:

- Malaria is only one of the many varieties of omushwizha. Prevention of malaria will therefore include only a part of the omushwizha-complex.
- The cause of malaria — a parasite transmitted by the mosquito — can be explained.
- Malaria affects certain groups (young children and pregnant women) more seriously.
- Possibly a parallel treatment of malaria may be advised in case of suspected 'engundu'.
- In case of very serious symptoms a patient needs to be brought to the hospital. If this is not possible, malaria may also be treated effectively at home. If, however, the symptoms remain, a referral to the clinic is necessary.

²⁶ A combination of (the quickly effective) chloroquine, 600 mg, with Fansidar, three tablets, might be a solution. Whether this is (bio-) medically safe will have to be determined.

Many of the measures which are advised above are presently also taken to heart. The encouragement of these measures will therefore probably also be welcomed.

The greatest obstacle will probably be the required change of behaviour regarding the practiced symptom treatment.

An even larger impediment will be found in the possibilities for primary prevention. Whether the recommendation of (impregnated) mosquito nets will be effective is very doubtful. It is therefore advised to restrict their use to the hospital itself, and possibly to initiate an experimental project in a small area, which would need to be evaluated afterwards.

One more final remark, perhaps unnecessarily: in this study only culture-bound perceptions of malaria have been reviewed. Other motivations (e.g. economic, political, religious), however, are of course also of interest in the acceptance of measures for the prevention of malaria. Especially financial motives will influence the purchase of mosquito nets and medicines.

This study does not aim to provide an acceptance-gauge for mosquito nets, either. Whether mosquito nets will be accepted or not will have to be practically determined. It may be clear, however, that with the underlying perceptions in mind, reasonable doubt exists as to whether the introduction of these nets will be a success. This doubt extends not only to the purchase, but particularly to the maintenance and regular impregnation.

Chapter 8: CONCLUDING REMARKS

The question as to how valid and reliable the obtained information is, cannot be answered completely in the affirmative. Particularly the necessary mediation of the interpreters made a complete 'check' impossible. Still, I think the results are valid and reliable: several procedures of control have been observed, and in the comparison between results from the group interviews, semi-structured individual interviews, observations, and daily conversations, no real differences occur. The main difference between and in the groups consists in the range of education, which affected the tendency to give biomedically shaded information. The only issue on which more control should have been exerted concerns the 'traditional diseases', which — from local perspectives — can only be cured with traditional treatment. With regard to the disease of 'engundu' (convulsions), for instance, the opinions differed greatly.

The other information is, in my opinion, sufficiently reliable and valid for drawing conclusions. The literature supports this information: Kengeya-Kayondo (1993) attributes more or less the same locally perceived causes to 'omusujja', the local word for malaria in another district of Uganda (Masaka). In Ghana (Agyepong, 1992) the sun, or heat, is also perceived as one of the causes of malaria, which would also change the blood and thus cause illness. In North Tanzania, finally, the 'nzoka' (snake) is also found, which may cause illness resulting from 'the wrong food' or 'heat' (Varkevisser, 1973).

The leading question '*What are the local perceptions of malaria in community X?*' has been answered along the lines of five main questions. It was found that the local community is quite able to recognize 'omushwizha' (the local word for malaria), and that its symptoms largely concur with those of biomedical malaria.

In terms of causes, however, these diseases differ from one another: the mosquito is seen as only one of the various causes. The others are traditional causes which may be categorized on the basis of their effects in the body: either they affect the blood (weather), or they affect the intestine (food and drink). If the causative agents originate from elsewhere, they are perceived as more malign.

The local treatment of omushwizha may also be categorized on the basis of the effects in the body: on the one hand the traditional herbs which affect the intestine (by causing the patient to vomit, or by causing diarrhoea), and on the other the herbs, biomedical tablets, and bloodletting, which affect the blood. The same division is found in diseases related to omushwizha.

When asked about prevention of omushwizha, people generally tend to reply that there is not much to be done; sometimes they simply come up with ways of treatment, or they sum up a number of precautionary measures which apply to hygiene in and around the house. Some of these precautionary measures can be termed as primary prevention of malaria (such as the elimination of stagnant water). All of these 'hygienic measures' have been taught by the Community Based Health Care team, which is active both locally and at the hospital. These precautionary measures are, indeed, not traditional. Generally speaking, secondary prevention is favoured over primary prevention in local perceptions.

A striking feature of local perceptions is the insistence on omushwizha as symptom: the typology of omushwizha is based on secondary symptoms; its causes are many; the treatment aims at elimination of the symptom, after which the treatment is stopped; and the idea of prevention, so inherent to biomedical cause-and-effect reasoning, is largely ignored.

Malaria, however, is thought of as cause in the biomedical perception: its typology is based on the various causative agents; there is only one cause, i.e. the malaria parasite, which is transmitted by the Anopheles mosquito; the treatment is aimed at eliminating the cause (the parasites) from the body, which logically requires a full completion of the cure, even if the symptoms have already disappeared; and, finally, prevention, particularly primary prevention, is seen as an obvious and attainable goal.

The opposition of cause versus symptom is not as such given in the literature. There are, however, some clues to be found (Helman, 1984; Schepers and Nievaard, 1990). Moreover, conversations with colleague researchers yielded some recognition of this basic opposition. It was considered to be a relevant insight which might also apply to other diseases than malaria.

Clearly, this opposition has implications for an intended malaria prevention policy: whereas secondary prevention (early treatment) would be more in line with local perceptions, it is desirable from the biomedical perception (WHO and the hospital) also to stimulate primary prevention. A number of suggestions and recommendations have been indicated, in which a slight personal preference for secondary prevention may be observed. This is not only feasible from the perspective of local perceptions, it may also be supported from a biomedical perspective: the local community needs to develop a certain degree of (semi-) immunity against malaria. Continual exposure to the disease is a requirement. In the long run, this will limit the number of victims and will prevent epidemics. However disagreeable it is to suffer an attack of malaria, I still would like to argue in favour of deferred action, to be taken once the patient has actually caught malaria. Of course, it is important to act in time, in order to prevent further complications. It is equally important to use the right medicine, in the right dosage, for malaria can, indeed, be effectively treated. Unfortunately, however, developing new, cheaper medicines for malaria which might ideally be used as 'symptom-remedy' is not on the pharmaceutical industry's list of top priorities.

Finally, I would like to make some suggestions for further research:

- I have already pointed out the importance of pharmacological research, in order to determine the effectiveness and possible harm of locally used herbs, as well as to develop new medicines which might be used as symptom-remedies.
- If I were to conduct another research, I would like to broaden the perspective from malaria to the whole range of local diseases. For a striking interrelationship was observed between the few diseases (e.g. worms, meningitis) that came up in passing this time.
- Besides sociocultural factors, others such as economic, political and religious factors might also be involved in further research.
- In addition, further research on perceptions of illness might be focused on the hypothesis of cause (biomedical perception) versus symptom (local perceptions).

One final suggestion to policymakers: research into perceptions is very well possible, and provides useful information. It would show some respect and insight if, before all sorts of 'health care developmental programmes' are imposed on non-western cultures, people would be

given the opportunity to speak for themselves, from their perceptions, in order to find, by means of a *joint* effort, a way that is acceptable to all parties of improving the local health situation. In my opinion, this kind of research is a precondition for the formulation of lines of policy, and it simply does not do, as is so often the case, to arrange plans according to western perspectives, and then to be surprised to discover that many of these plans fail, owing to 'organizational and sociocultural factors'.

Glossary

(Runyankole — English)

ebiankole	— traditional disease, literally: disease of the Ankole tribe
ebiyaga	— convulsions or epilepsy, which can, according to traditional perceptions, still be treated
enjoka	— snake, worms, or intestine
engundu	— traditional disease, convulsions; can, according to traditional perceptions, still be treated
ekibombo	— traditional herb used for omushwizha or worms
ekirumiko	— top end of a cow's horn, used for eliminating bad blood from the body, or charms from the blood
ekishakashekye	— traditional herb for omushwizha and worms
ensimbo	— convulsions, epilepsy; a stage, according to traditional perceptions, which cannot be cured
'false teeth'	— white dots in the mouth of a baby; they cause diarrhoea, and need to be extracted
matooke	— plantains (green bananas used for cooking)
mukasimarofa	— herb used for headache; is said to slow down the accelerated blood stream which causes the pain
okurumiko	— bloodletting with the use of 'ekirumiko'
okushandaga	— bloodletting on the forehead, traditionally used for headache
omubilisi	— traditionally used herb for omushwizha
omuraramu	— meningitis, literally: the one that makes you look up
omushwizha	— malaria, or fever
omutondigwa	— traditional herb for omushwizha and worms
rokaka	— jaundice
tonto	— banana beer
waragi	— banana gin

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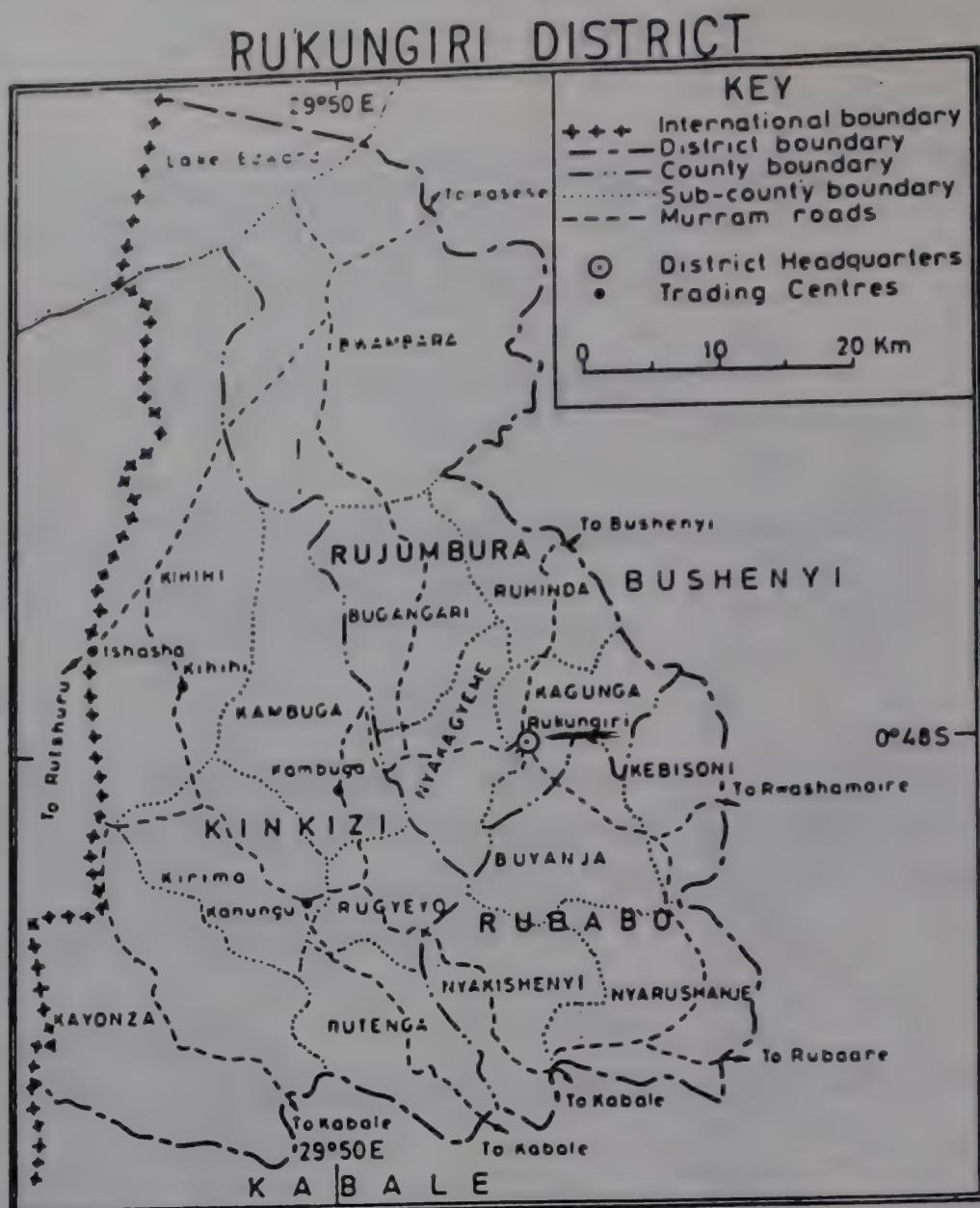
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Appendix 2: Information concerning the Rukungiri district



Rukungiri District

Location:

It borders with the districts of Bushenyi in the east, Kabale and Kisoro in the south, Lake Edward in the north and the Republic of Zaire in the west.

It was formerly part of the old Kigezi district.

Size:

2,735 Sq kms.

Climate:

The district has characteristics of both the Savanna and modified equatorial climate zones. Rainfall is heavy for example in the period between April and June 1991, it received 118mm in 8 rain days

Population:

388,000 people: Female - 202,200, Male - 185,800, Urban dwellers - 12,800, Rural dwellers - 375,200.

Administration Headquarters:

Rukungiri town.

Counties:

Kinkizi, Rubabo and Rujumbura with a total of 17 sub counties.

Main Languages:

Ruhoromo, Runyankore and Rukiga.

Economic Activities:

Mainly agriculture with an emphasis on:

(i) Food Crops: Beans, Sweet Potatoes, Maize, Sorghum, Cassava, Soya Beans, Groundnuts, Bananas, Sunflower, Sim Sim and Cow Peas.

(ii) Cash Crops: Coffee, Tobacco.

(iii) Fruits and Vegetables: Pineapples, Tomatoes, Onions and Cabbages.

(iv) Dairy farming.

(v) Fishing on Lake Edward.

Industries:

Grain milling, bakers, furniture and wood work; processing of coffee and tobacco.

Education:

317 Primary Schools, 27 Secondary Schools, 2 Technical Institutions, 2 Teacher Training colleges.

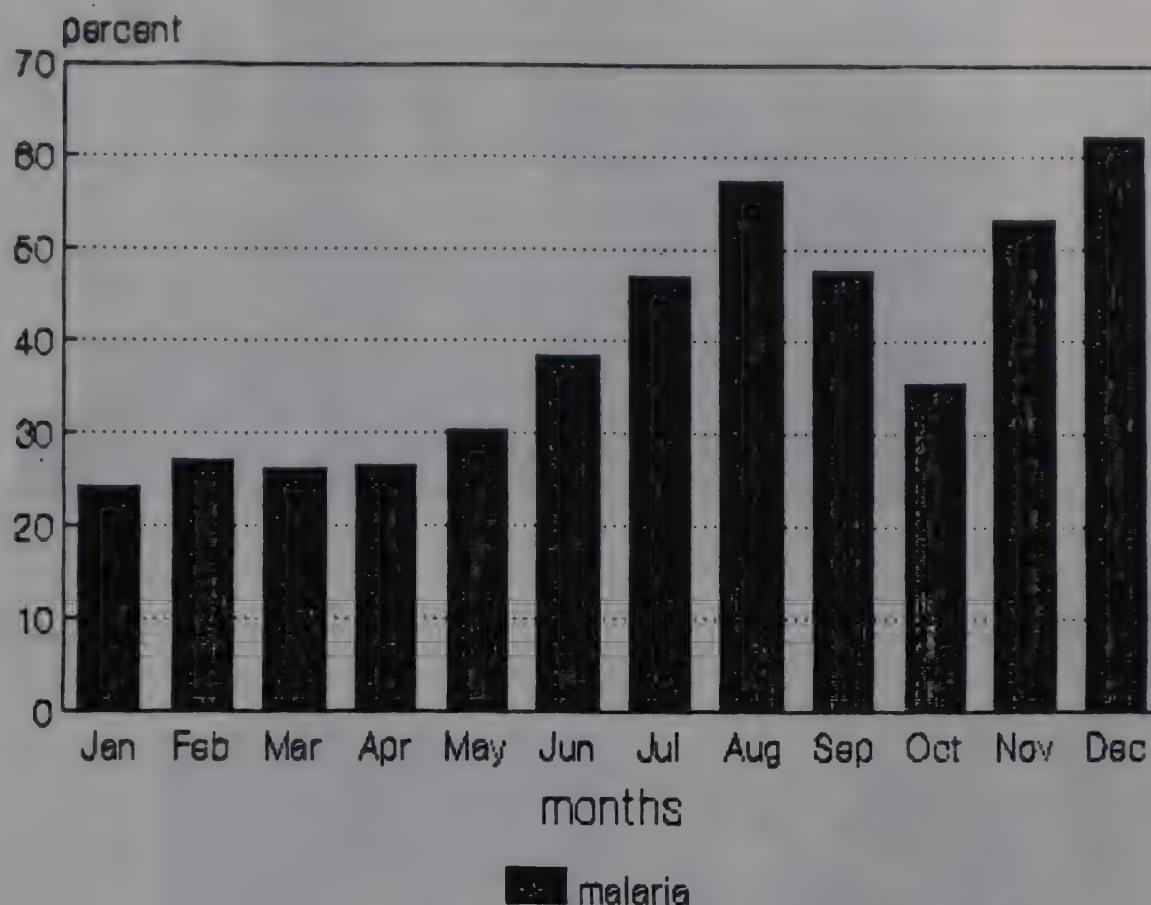
Health Services:

Kambuga Hospital with 114 beds, Nyakihale Hospital and 22 health centres.

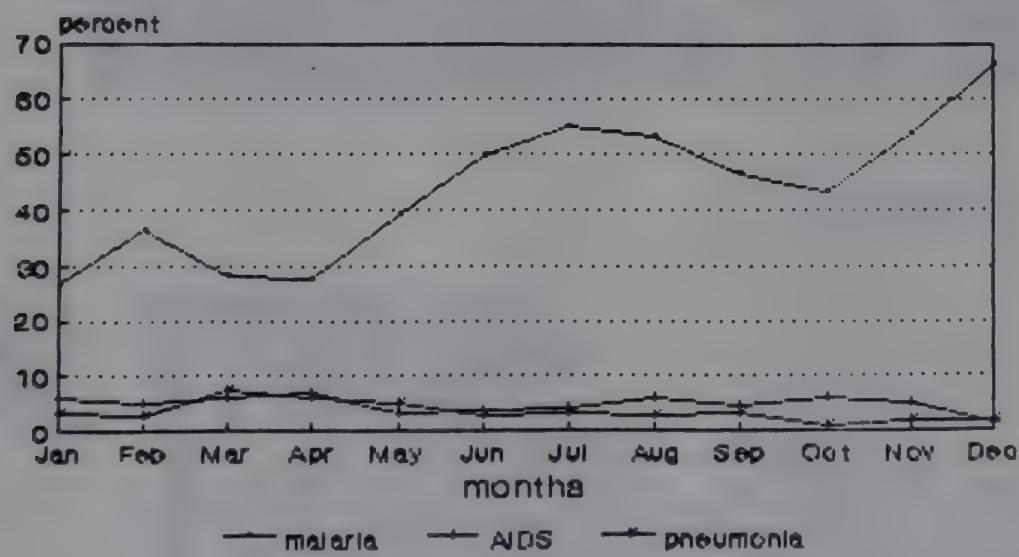
Other Information:

Bwindi impenetrable national park, the world's largest home of Gorillas, is found here.

Outpatient attendance(Malaria)



InPatient Admissions(Top Three)



Appendix 4: Illustrations of focus group discussions

Old men Mutooma:



Old women Mutooma:



Young women Nyakagyeme:



Appendix 5: Traditional herbs used for the treatment of 'omushwizha'

omubilisi:



ekishakashekye:



ekibombo:



Appendix 6: The traditional treatment of 'charms' in the blood through 'okurumiko'

Green leaves are wrapped around the 'ekirumiko', or the top end of a cow's horn:



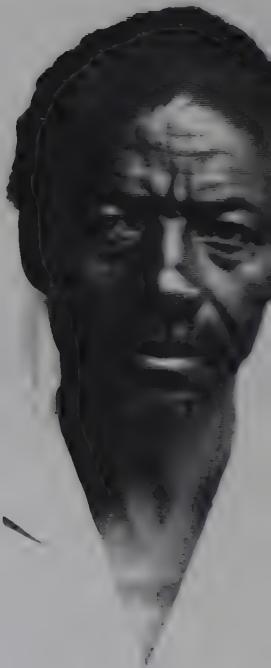
The 'ekirumiko' is sucked vacuum on the skin:



The 'ekirumiko' is attached to the skin; the blood containing the charms is sucked out:



Appendix 7: Scars caused by 'okushandaga', i.e. phlebotomy or blood-letting on the head in order to treat headache



**Appendix 8: Information on malaria as it is given to Community Health Workers (Uganda
Community Based Health Care Association, 1991)**

MALARIA

BY THE END OF THE LESSON THE CHW WILL BE ABLE TO:

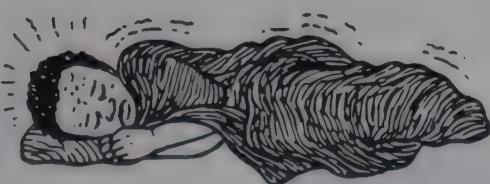
K - 1. Give the signs and symptoms of malaria.
2. Be able to treat malaria with the appropriate dose of chloroquine for age.
3. Describe how a person gets malaria and how to prevent it.

A - Be willing to take preventive measures against malaria in the community.

P - Treat malaria with the correct doses of chloroquine.

MAIN POINTS TO DISCUSS

1. Appearance
 - children : high fever, hot body, fast breathing, occasionally can look like fits
 - adults : high fever, headaches, spells of coldness, aching body



2. Transmission - mosquito bites infected person and later bites someone else who will fall sick some time later

- How would you treat a child of 1 & 1/2 years has malaria ?

2. Has the CHW taken any action as a result of the lesson?
- Have you advised anyone on the treatment of malaria in your area ?
- What advice did you give ?

ACTION

PREVENTION OF MALARIA

BY THE END OF THE LESSON THE CHW WILL BE ABLE TO:

K - Explain clearly how malaria can be prevented. A person willing to do something about prevention.

P - Practice preventive measures and encourage the community to do the same.

MAIN POINTS TO DISCUSS

1. Prevention and control of malaria
 - eliminate mosquito breeding sites by:
 - + clearing bush in and around compound
 - + covering up all ditches within compound
 - + eliminate stagnant water
 - + dispose of all broken bottles or containers which water can collect in
 - treat all infected people appropriately
 - emphasize need for community involvement and cooperation in mosquito control

Mosquito Nets Can Give Some Personal Protection Against Malaria



Appendix 9: Grants of permission for this research by various local authorities

Gambololo chief's office
Nyakagyaens - Rujumbura
18/05/1993

TO WHOM IT MAY CONCERN

RE: Miss MARIE - LOUISE KLAVER.

The underlined has passed through my office. She is on Malaria Study. Please she is ~~on~~ on a good exercise so any assistance rendered to her is highly appreciated.

I remain yours faithfully

RUKUNGIRI DISTRICT
ADMINISTRATION

[Signature] 23

LARYENGBOMA - TIBANYENDA

SUB-COUNTY CHIEF

DISTRICT MEDICAL OFFICER'S OFFICE,
RUKUNGIRI DISTRICT,
P.O. BOX 68,
RUKUNGIRI.

4th May, 1993.

TO WHOM IT MAY CONCERN:

This serves to introduce Marie-Lovise Klaver a student at Erasmus University Rotterdam who is going to conduct a malaria study in Caroli Lwanga Hospital Nyakibale and the areas around the Hospital

Any assistance accorded to her will be highly appreciated.

[Signature]
D.M.O.
(DR. JAMES AKATWIJUKA)

DISTRICT MEDICAL OFFICER / RUKUNGIRI.

DIS-317
11278 N°13

